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IN TWENTY THREE VOLUMES.

VOL. VIII.

LONDON:

PRINTED FOR VERNOR, HOOD, AND SHARPE, 31, POULTRY;

AND THOMAS OSTEEL, AVE MARIA LANE.

R. Morison, Printer, Perth.

1807.



ENCYCLOPÆDIA PERTHENSIS.

E D I

(L 1.) **EDINBURGH**, the metropolis of Scotland, is situated in the county of Mid Lothian, about a mile S. from the Frith of Forth; in Lon. 3. o. W. Lat. 56. o. N. The old town is built upon a steep hill, rising from E. to W. and terminating in a high and inaccessible rock, upon which the castle stands. At the E. end or lower extremity of this hill stands the abbey of Holyrood-house, the ancient royal palace, distant from the castle upwards of a mile; and betwixt which along the top of the ridge, and almost in a straight line, runs the high street. On each side, and parallel to this hill, are other two ridges of ground lower than that in the middle, and which do not extend so far to the E. than on the S. being intercepted by Salisbury Craigs, and **ARTHUR'S SEAT**, a hill about 300 feet high: and that on the N. by the Calton hill, considerably lower than Arthur's Seat: so that the situation of this city is most singular and romantic; the E. or lower part of the town lying between two hills; and the W. or higher part rising up towards a third hill, little inferior in height to the highest of the other two, upon which the castle is built, and overlooks the town. The buildings of the town terminate on the W. about 200 yards from the castle gate; which space affords a most delightful as well as convenient and healthful walk to the inhabitants. The prospect from this spot is perhaps the finest any where to be met with, for extent, beauty, and variety. In the valley or hollow betwixt the mid and the south ridges, and nearly parallel to the high street, is another street called the *Cowgate*; and the town is now extended over most part of that south ridge also. Betwixt the mid and the north ridges was a lake, called the *North Loch*, which, before it was drained, terminated the town on that side. And, if tradition may be credited, there was formerly a *South Loch* in the valley where the *Cowgate* now stands; which indeed appears extremely probable from the name of the *North Loch*. From the high street down to the loch on the N. and to the *Cowgate* on the S. run narrow cross streets or lanes, called *wynds* and *clofs*, which grow steeper and steeper the farther west towards the castle; so that, were it not for the closeness and great height of the buildings, this city, from its situation and plan, might naturally be expected to be the best aired, as well as the cleanest, in Europe. The former, notwithstanding these disadvantages, it enjoys in an eminent

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E D I

degree; and every possible means has been used by the magistrates to accomplish the latter object, and with considerable success. The steepness of the ascent makes the access to the high street from the north and south very difficult; which no doubt greatly retarded the enlargement of the city. To remedy this inconvenience on the north, and with a view to extend the town on that quarter, a most elegant bridge has been thrown over the north loch, which joins the north ridge to the middle of the high street, by so easy an ascent as one in 16 and in pursuance of the design, a plan of a new town to the north was fixed upon, and is now nearly finished, with an elegance and taste that does honour to this country. In like manner, to facilitate the access from the south side, a bridge has been thrown over the valley, through which the *Cowgate* runs; which, if not equally elegant with the north bridge, is certainly as convenient.

(2.) **EDINBURGH, ANCIENT ACCOUNTS OF** The Romans, during the time they held the dominion of part of this island, divided their possession into six provinces. The most northerly of these was called *Valentia*, which comprehended all the space between the walls of **ADRIAN** and **SEVERUS** Edinburgh, lying on the very out-skirts of that province which was most exposed to the ravages of the barbarians, became perpetually subject to wars and devastations; by means of which, the time of its first foundation cannot now be guessed at. The castle, however, is certainly very ancient. According to our earliest historians, it was built by **Camelon** king of the Picts, about A. A. C. 330. Be that as it may, it was in the hands of the Anglo-Saxons, from the invasion of **Ofta** and **Ebusa** in 452, till the defeat of **Egfrid** king of Northumberland in 685, by the Picts, who then repossessed themselves of it. The Saxon kings of Northumberland reconquered it in the 9th century and it was retained by their successors till the year 956, when it was given up to **Indulfus** king of Scotland. In 1093, it was unsuccessfully besieged by the usurper **Donald Bane**. In 1128, **K. David I.** founded the Abbey of Holyrood-house, for certain canons regular; and granted them a charter in which he styled the town *Burgo meo de Edwinesburg*, "my borough of Edinburgh." By the same charter he granted these canons 40 lb. yearly out of the town's revenues; with 48 lb. more from the same, in case of the failure of certain duties.

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ties payable from the king's revenue; and one half of the tallow, and hides, of all the beasts killed in Edinburgh. In 1174, the castle of Edinburgh was surrendered to Henry II. of England, to purchase the liberty of K. William I. who had been taken prisoner by the English. But William afterwards entered into an alliance with Henry, and married his cousin Ermengarde; upon which the castle was restored as part of the queen's dower. See § 9.

(3.) EDINBURGH, ANCIENT DIMENSIONS OF. The gradual increase of the city of Edinburgh may in some degree be understood from the traces of its ancient walls that still remain. James II. in 1450, first bestowed on the community the privilege of fortifying the city with a wall, and empowered them to levy a tax upon the inhabitants for defraying the expence. When the city was first fortified, the wall reached no further than the present water-house, or reservoir, on the castle hill: from thence to the foot of Halkerstone's wynd, just below the North bridge, the city was defended by the North loch. From this place to the foot of Leith wynd, it does not now appear how the city was fortified; but from the foot of Leith wynd to the Netherbow port it was defended only by a range of houses; and when these had become ruinous, a wall was built in their place. The original wall of Edinburgh, therefore; began at the foot of the NE. hook of the castle. Here it was strengthened by a small fortress, the ruins of which are still to be seen, and are called the *well house tower*, from their having a spring in their neighbourhood. When the wall came opposite to the reservoir, it was carried quite across the hill, having a gate on the top for making a communication between the town and castle. In going down the hill, it went slanting in an oblique direction to the first angle in going down the West Bow, where was a gate named the *Upper-bow port*, one of the hooks of which still remains. Thence it proceeded eastward in such a manner, as would have cut off not only all the Cowgate, but some part of the parliament house; and being continued as far as the mint close, it turned to the NE. and was connected with the buildings on the N. side of the high street, where was the original *Netherbow port*; about 50 yards W. from that which afterwards went by the same name. Soon after the building of this wall, a new street was formed on the outside of it, named the *Cowgate*, which; in the 16th century became the residence of the nobility; the senators of the college of justice, and other persons of the first distinction. After the fatal battle of Flodden, however, the inhabitants of the Cowgate became very anxious to have themselves defended by a wall as well as the rest. The wall of the city was therefore extended to its present limits. This new wall begins on the SE. side of the rock on which the castle is built; and to which the town wall comes quite close. From thence it descends obliquely to the West port; then ascends part of a hill on the other side, called the *High Riggs*; after which, it runs E. with but little alteration in its course, to the Bristo and Potter Row ports, and from thence to the Pleasance. Here it takes a northerly direction; which it keeps from thence, to the Cowgate port, after which the inclosure is completed to the Ne-

therbow by the houses of St Mary's wynd. The original Netherbow port, being found not well adapted for defence, was pulled down, and a new one built in 1571 by the adherents of queen Mary. In 1606, the late handsome building was erected about 50 yards below the place where the former stood. It was two stories high, and had an elegant spire in the middle; but being thought to encumber the street, and the whole building being in a crazy situation, it was pulled down by order of the magistrates in 1762. In the original wall of Edinburgh there was a port on the castle-hill. On the extension of the wall, after building the houses in the Cowgate, this gate was pulled down. That in the Upper or West Bow stood for a much longer time, and was pulled down within the memory of some persons lately or perhaps still living. Besides these, there was a third, above 50 yards above the head of Canon gate; but whether there were any more, or not, is uncertain. The ports or gates of the walls were, 1. The *West port*, situated at the extremity of the Grass-market; beyond which lies a suburb of the town and a borough of regality, called *Portsburgh*. Next to this is a wicket, struck out of the town wall, in 1744, for the purpose of making an easier communication between the town and the public walks in the meadows, than by Bristo port. The next to this was *Bristo port*, built in 1515; beyond which lies a suburb called *Bristo street*. At a small distance from Bristo was the *Potter-row Port*, which took this name from a manufactory of earthen ware in the neighbourhood. Formerly it was called *Kirk of Field Port*. Between this and the Cowgate port stood another, called *St Mary's Wynd Port*, which extended from E. to W. across the foot of the Pleasance, and which was demolished before the end of the last century.—Close to the middle of this stood the *Cowgate port*; which opened with a communication between the Cowgate and St Mary's wynd, and the Pleasance.—At the foot of Leith wynd was another gate called *Leith Wynd Port*; and within it was a wicket giving access to the church of Trinity College, and which still remains. At the foot of Halkerstone's wynd was another, which, as well as the former, was built about 1560, and all the rest in 1785. A single arch still remains at the foot of the Canon gate, called the *Water Gate*. For 250 years the city of Edinburgh occupied the same space of ground. In the middle of the 16th century, it is described as extending in length about an Italian mile, and about half as much in breadth; which answers very nearly to its present limits, the late enlargements only excepted. This space of ground, however, was not at that time occupied in the manner it is at present. The houses were neither so high nor so crowded upon each other as they are now. These were consequences of the number of inhabitants increasing, which occasioned the raising of the houses to such an height, as perhaps is not to be paralleled in any other part of the world. Till the Reformation, the burying ground of the city extended over all the space occupied by the Parliament close, and from thence to the Cowgate. The lands lying S. of the Cowgate were chiefly laid out in gardens belonging to the convent of Black Friars, and the

the church of St Mary in the Field. These extended almost from the Pleasance to the Potterrow port. From the Bristo to the West Port the ground was laid out in gardens belonging to the Gray Friars. The magistrates on applying to queen Mary, obtained a grant of the Gray-friars gardens for a burying place. In the time of James I the houses within the walls seem to have been in general, if not universally, covered with thatch or broom; and not above 20 feet high. Even in 1611, these roofs were so common, that they were prohibited by act of parliament, in order to prevent accidents from fire.—In the middle of the last century, there were neither courts nor squares, in Edinburgh. The Parliament close or square is the oldest of this kind in the city. Miln's square, James's court, &c. were built long after; Argyle's square within these 60 years, and Brown's square within these 40.

(4.) EDINBURGH, ANCIENT NAMES AND ETYMOLOGIES OF. The origin of the name, like that of most other cities, is very uncertain. Some imagine it to be derived from Eth, a king of the Picts; others from Edwin, a Saxon prince of Northumberland, who over-ran the whole or greatest part of the territories of the Picts about A. D. 617; while others derive it from the Gaelic words, *Dun Edin*, signifying the face of a hill. The name *Edinburgh*, however, seems to have been unknown in the time of the Romans. The most ancient title by which we find this city distinguished is that of *Castell Mynyd Agned*; which, in the British language signifies, “the fortress of the hill of St Agnes.” Afterwards it was named *Castrum Pictarum*, because the Pictish princesses were educated in the castle (a necessary protection in those barbarous ages) till they were married.—The ages in which these names were given cannot now be exactly ascertained, but we cannot agree with the inference drawn by Mr Whittaker, against the antiquity of this city, from the battle said to have been fought on the spot by king Arthur in the 5th century. That battle might have been fought on the S. or N. sides of the town, or on the low ground where the Canonate now stands, and yet the city itself have been built and inhabited many centuries before; which in all probability it was, on account of the protection afforded by the castle, the antiquity of which is undoubted. See § 5.

(5.) EDINBURGH, CASTLE OF. The castle stands on a high rock, accessible only on the E. side. On all others it is very steep, and in some places perpendicular. It is about 300 feet high from its base: so that before the invention of artillery, it might have well been deemed impregnable; though the event showed that it was not. The entry to this fortress is defended by an outer barrier of palisades; within this is a dry ditch, draw-bridge, and gate, defended by two batteries which flank it; and the whole is commanded by an half moon surrounded with cannon, carrying balls of 12 pounds. Beyond these are two gate-ways, the first of which is very strong, and has two portcullises. Immediately beyond the second gate-way, on the right hand, is a battery mounted with cannon, carrying balls of 12 and 18 lb. weight. On the N. side are a mortar and some gun batteries. The upper

part of the castle contains a half-moon battery, a chapel, a parade for exercise, and a number of houses in the form of a square, which are laid out in barracks for the officers. There are also other barracks sufficient to contain 1000 men; a powder magazine bomb-proof; a grand arsenal, capable of containing 8000 stand of arms; and other apartments which can contain full 22,000 more: so that 30,000 stand of arms may be conveniently lodged in this castle. And within these 4 years additional barracks have been built at the back of the governor's house. On the E. side of the square were formerly royal apartments; in one of which king James VI. was born, and which is still shown to those who visit the castle. In another, the regalia of Scotland were deposited on the 26th March, 1707, and were long supposed to be still kept there; but were never shown. Hence a suspicion arose that they had been privately carried to London; which was confirmed by the keeper of the jewel office in the tower of London showing a crown, which he calls the *Crown of Scotland*: within these few years, however, the *Crown Room* was opened by lord Adam Gordon, in presence of some noblemen, who found only a leaden chest containing a few old charters. The governor of the castle is generally a nobleman, whose place is worth about 1000l. a year; and that of deputy governor, 500l. This last resides in the house appointed for the governor, as the latter never inhabits it. There is also a fort-major, a store-keeper, master gunner, and chaplain; but as this last does not reside in the castle, worship is seldom performed in the chapel. The parliament house was formerly included in the great square on the top, and the royal gardens were in the marsh afterwards called the *North Loch*; the king's stables being on the south side, where the houses still retain the name, and the place, where the barns were, still retains the name of *Castle-barns*. The castle is defended by a company of invalids, and about 500 men belonging to some marching regiment, though it can accommodate 1000, and this number has been sometimes kept in it. Its natural strength of situation was not sufficient to render it impregnable, even before the invention of artillery, much less would it be capable of securing it against the attacks of a modern army well provided with cannon. It could not, in all probability, long withstand a well directed bombardment; for no part but the powder magazine is capable of resisting these destructive machines. Besides, the water of the well, which is very bad, and drawn up from a depth of 100 feet, is apt to subside on the continued discharge of artillery, which produces a concussion in the rock; though this deficiency has been supplied within these 5 years by a pipe from the city reservoir.

(6.) EDINBURGH, CHURCHES OF. *St Giles's Church* is a beautiful Gothic building, measuring in length 206 feet. At the W. end, its breadth is 110 feet, in the middle, 129; and at the E. end, 76. It has a very elevated situation, and is adorned with a lofty square tower; from the sides and corners of which rise arches of figured stone work: these meeting with each other in the middle, complete the figure of an imperial crown, the top of

which terminates in a pointed spire. The whole height of this tower is 161 feet. This is the most ancient church in Edinburgh. From a passage in an old author called *Simoon Dunelmensis*, some conjecture it to have been built before the year 854; but we do not find express mention made of it before 1359. The tutelar saint of this church, and of Edinburgh, was ST GILES, a native of Greece. See GILES, ST. This church was at first simply a parish church, of which the bishop of Lindisfarne or Holy Island, in the county of Northumberland, was patron. He was succeeded in the patronage by the abbot and canons of Dunfermline, and they by the magistrates of Edinburgh. In 1466, it was erected into a collegiate church by James III.—At the Reformation, the church was, for the greater convenience divided into several parts. The four principal divisions form as many churches appropriated to divine worship; the lesser ones to other purposes. At the same time the religious utensils belonging to this church were seized by the magistrates. They were,—St Giles's arm, enshrined in silver, weighing 5 lb. 3½ oz. a silver chalice, or communion cup, weighing 23 oz. the great *eucharist* or communion cup, with *golden weike and flones*; two cruets of 25 oz.; a golden bell, with a heart, of 4½ oz.; a golden unicorn; a golden pix, to keep the host; a small golden heart, with two pearls; a diamond ring; a silver chalice, patine, and spoon, of 32½ oz.; a communion table-cloth of gold brocade; *St Giles's coat*, with a little piece of red velvet which hung at his feet; a round silver *eucharist*: two silver censers, of 3 lb. 15 oz.; a silver ship for incense; a large silver cross, with its base, weighing 16 lb. 13¼ oz. a triangular silver lamp; two silver candlesticks, of 7 lb. 3 oz. other two, of 8 lb. 13 oz.; a silver chalice gilt, of 20½ oz.; a silver chalice and cross, of 75 oz. besides the priests robes, and other vestments, of gold brocade, crimson velvet embroidered with gold, and green damask.—These were sold, and part of the money applied to the repairs of the church; the rest was added to the funds of the corporation. In the steeple of St Giles's church are three large bells brought from Holland in 1621; the biggest weighing 2000 lb. the second 700, and the third 500. There are also a set of music bells, upon which tunes are played every day, except Sunday, between 1 and 2 o'clock, or at any time in the case of public rejoicings; being played by the hand, not by clock-work. The principal division is called the *High Church*, and has been lately repaired and new seated. There is a very elegant and finely ornamented royal seat, with a canopy supported by four Corinthian pillars, decorated in high taste, which is used by the king's commissioner during the time the General Assembly sits. On the right hand is a seat for the lord high constable of Scotland, whose office it is to keep the peace within doors in his majesty's presence; it being the duty of the earl marshal to do the same without. The seats belonging to the lords of council and session are on the right of the lord high constable; and on the left of the throne was a seat for the lord high chancellor of Scotland, whose office is now abolished. On the left of this sit the barons of exchequer; and, to the left of them, the lord

provost, magistrates, and town-council. The pulpit, king's seat, and galleries, are covered with crimson velvet with gold and silk fringes. The aisle of St Giles's church is fitted up with seats for the general assembly who meet here; and there is a throne for his majesty's commissioners with a canopy of crimson silk damask, having the king's arms embroidered with gold, presented by the late lord Cathcart to his successor in office. In this church is a monument dedicated to the memory of the celebrated lord NAPIER, the inventor of logarithms; another to the earl of Murray, regent of Scotland during the minority of James VI. and a 3d to the great marquis of Montrose. The names of the 4 churches, into which St Giles's is divided, are, the *New*, or *High Church*, above described; the *Old Church*; the *New North Church*, or *Haddow's Hold*, so named from the Laird of Haddow having been for some time imprisoned in it; and the *Tolbooth Church*. The *Trone Church*, whose original and proper name is *Christ's Church*, though it is now hardly known by that name, is an elegant structure erected in 1641, with a spire, on the S. side of the High Street, in Hunter Square, between the N. and S. bridges. As part of this church projected several feet eastward upon the road between the bridges, the walls were taken down and rebuilt, and the projection cut off. *Lady Yester's Church* is situated on the W. side of the High School Wynd, and NE. of the Royal Infirmary. It owes its origin to the piety of Dame Margaret Kerr, Lady Yester, who in 1647 gave to the council and citizens of Edinburgh 15,000 merks for that purpose. The *Old* and *New Gray Friars* churches are situated on the top of the S. ridge, E. of Heriot's Hospital, nearly in the middle of the ancient gardens belonging to the Gray Friars; which have been occupied as the common burying ground since 1561, and ornamented with many fine monuments round the walls. These churches are of equal length, and both under one roof, and have one common portico; but are separated by a partition wall. The old Gray Friars was founded about 1612, and had a steeple, which was blown up in 1718, owing to some gun-powder having been lodged in it belonging to the town. Instead of rebuilding the steeple, the New Gray Friars church was built adjoining to it, and upon part of its site, the old church being shortened a little for that purpose in 1719. The expense of this church was L. 3,045. The *Trinity College Church* was founded by Q. Mary, wife of king James II. in 1461, at the same time with the Trinity Hospital. (See § 12.) It is situated at the foot of Leith Wynd, 420 feet E. of the North Bridge. These churches give name to the 9 parishes into which the old town is divided. *St Andrew's Church* stands on the N. side of George's Street, in the New Town. It is of an oval form; and has a very neat spire of 186 feet in height, with a chime of 8 bells, the first and only one of the kind in Scotland. It has also a handsome portico in front. There are two churches in the CANONGATE. The oldest, which is situated about the middle of that street on the N. side, has an open area around it, which serves as a burying ground. It was built in 1688, and cost about 2400 l. being the accumulated principal

pleased interest of 20,000 marks left for that purpose, by a Mr Thomas Moodie. It was within these few years repaired in a very elegant manner. The other church is situated in New Street, and was finished in 1794. It is a very neat commodious building. *St Caribbert's*, or the *West Kirk*, is situated W. of the Castle, in the middle of the West Church-yard, a little E. from the head of Prince's Street. It is large, elegant and commodious, and was rebuilt on the site of the old West Kirk, within these 20 years. An elegant spire has been since added, which has a fine appearance from the N. Bridge and Earthen Mound. The *Glen Chapel*, or *Kearse Church* at Edinburgh was built about 30 years ago by subscription, for the laudable purpose of instructing those who are little acquainted with any language but Gaelic, in the principles of Christianity. Great numbers of people resort to the metropolis from the Highlands, who understand no other language, and consequently have no opportunity of instruction without it; and a most remarkable proof of the benefit they have received from it is, that though the church is capable of holding 1000 people, yet it is not large enough for those who apply for seats; in consequence of which another has been lately built in Leith Wynd. The ministers have about 100 l. *per annum* arising from the seat-rents, and hold communion with the church of Scotland. The establishment of the first of these was promoted by William Dickson dyer in Edinburgh. Besides these churches, there is another, which, though its minister and congregation are in communion with the church of Scotland, cannot be strictly said to be in the establishment, being neither a parish church, nor chapel of ease, though it certainly operates essentially in the latter capacity, by easing the crowded churches in the city of a part of their audiences. This is *Lady Glenorchy's Chapel*, which is situated in the Orphan Hospital Park, E. of the North Bridge and W. of the College Church. It was built in 1773 and 74, at the sole expense of the late pious Wilhelmina Maxwell, lady V. Glenorchy. It is neatly finished, and holds 2000 people, having two galleries, which go round 3 sides of it. The middle part is allotted to the poor, who sit there *gratis*; a tendency in other churches, which the benevolent founders was anxious to supply. Upon what principle this church was refused to be admitted upon the establishment, it is not easy to say; but it is certain, that though the presbytery of Edinburgh unanimously approved of Lady Glenorchy's proposal, the synod of Lothian and Tweeddale not only gave a contrary decision, but prohibited the ministers and probationers within their bounds to preach in it. This illiberal decision, however, was reversed, and matters settled on their present footing by the General Assembly in 1777. The *English Chapel* stands near the foot of the Cowgate, and was founded on the 30 April 1771. The foundation stone was laid by General Oughton, with the following inscription: *Adipis facit. Ecclesia episc. Angliæ, primus posuit lapidem J. Adolphus Oughton, in archiepiscopi Sæule repub. curio maximus, militum præfatus, regnante Georgio III. tertio Apr. die A. D. MDCCXXI.* It is a plain handsome building,

neatly fitted up in the inside, and somewhat resembling the church of St Martin's in the Fields, London. It is 90 feet long, 75 broad, and ornamented with an elegant spire of considerable height. It is also furnished with an excellent bell, formerly belonging to the chapel royal at Holyrood-house, which is permitted to be rung for assembling the congregation; *an indulgence not granted to the Presbyterians in England.* The expense of the building was defrayed by voluntary subscription; and, as another evidence of the liberal spirit of our age and country, people of all persuasions contributed. This chapel has already cost 7000 l. and will require 1000 l. more to finish the portico. It is built in a singular manner, viz. from S. to N. and the altar-piece stands on the E. side. Three clergymen officiate, of whom the first has 150 l. the others 100 l. each. The altar-piece is finely decorated, and there is a good organ. There is another Episcopal chapel, but small, in Black Friars Wynd, which was founded by baron Smith in 1742. There are also some meetings of the Episcopal church of Scotland, who adhere to their old forms, having still their bishops and inferior clergy, ordained in regular succession. For some time these were subjected to penal laws, as they refused to take the oaths to government, or mention the present royal family in their public prayers: but upon the death of prince Charles Stuart in 1788, they conformed, and had their conduct approved of by his Majesty. They have an elegant new chapel built in 1789, in Drummond Street, at the back of the Royal Infirmary. The Methodists have also an elegant chapel, a little to the NE. of the College Church, built in an octagonal form. The meeting-houses of the various dissenters from the Church of Scotland are likewise elegantly finished; particularly that of the Burgher Seceders, in the New Town, and those of the Anti-Burghers in the Old Town S. side. The Relief church is quite new, the old one built in 1770, having been taken down in 1797, on account of widening the street at the back of the New College, and rebuilt in 1798.

(7.) EDINBURGH, ECCLESIASTICAL COURTS HELD IN. The presbytery of Edinburgh meets once a month in a hall in Scott's close; the provincial synod of Lothian and Tweeddale once a quarter, in the same place; and the General Assembly, which is the highest ecclesiastical court in Scotland, meets annually in May. See SCOTLAND, CHURCH OF. It is hardly necessary to add, that the kirk sessions of the different parishes meet regularly once a-week in the metropolis as well as in the other parishes of the kingdom.

(8.) EDINBURGH, GOVERNMENT OF. See § 13.

(9.) EDINBURGH, HISTORY OF, TILL THE BEGINNING OF THE 17th CENTURY. In 1215, this city was first distinguished by having a parliament and provincial synod held in it.—In 1296, the castle was besieged and taken by Edward I. of England; but was recovered in 1313 by Randolph, E. of Moray, afterwards regent, during the minority of K. David II. K. Robert II. destroyed this fortress, as well as all others in Scotland, that they might not afford shelter to the English, in any of their after incursions. It lay in ruins for a considerable number of years; but was afterwards rebuilt by Edward III. of England, who placed a strong

Among garrison in it. In 1341, the Scots recovered it by the following stratagem. A man, pretending to be an English merchant, came to the governor, and told him that he had on board his ship in the Forth some wine, beer, biscuits, &c. which he would sell him on very reasonable terms. A bargain being made, he promised to deliver the goods next morning at a very reasonable rate; but at the time appointed, twelve men, disguised in the habit of sailors, entered the castle with the goods and supposed merchant; and having instantly killed the porter and centinels, Sir William Douglas, on a preconcerted signal, rushed in with a band of armed men, and quickly made himself master of the place, after having cut most of the garrison in pieces. In 1437, the E. of Athol and his accomplices were executed at Edinburgh for the murder of K. James I. The crime, it must be owned, was execrable; but the punishment was altogether shocking. For three days successively the assassins were tortured by putting on their heads iron crowns heated red hot, dislocating their joints, pinching their flesh with red hot pincers, and carrying them in that dreadful situation through the streets upon hurdles. At last an end was put to their sufferings, by cutting them up alive, and sending the parts of their mangled bodies to the principal towns of the kingdom. About the end of the 14th century it was customary to consider Edinburgh as the capital of the kingdom. The town of Leith, with its harbour and mills, had been bestowed upon it by Robert I. in 1329; and his grandson Robert III, conferred upon all the burghesses the singular privilege of building houses in the castle, upon the sole condition that they should be persons of good fame; which we must undoubtedly consider as a proof that the number of these burghesses was at that time very small. In 1461, a very considerable privilege was conferred on the city by Henry VI. of England when in exile; viz. that its inhabitants should have liberty to trade to all the English ports on the same terms with the city of London. This privilege was bestowed in consequence of the kindness with which that king was treated in a visit to the Scottish monarch at Edinburgh; but as Henry was never restored, his gratitude was not attended with any benefit to this city. From this time, however, its privileges continued to be increased from various causes. In 1482, the citizens had an opportunity of liberating K. James III. from the oppression of his nobles, by whom he had been imprisoned in the castle. On this account the provost was by that monarch made hereditary high sheriff within the city, an office which he continues still to enjoy. The council at the same time were invested with the power of making laws and statutes for the government of the city; and the trades, as a testimony of the royal gratitude for their loyalty, received the banner known by the name of the *Blue Blanket*; an ensign formerly capable of producing great commotions, but which has not now been displayed for many years past. However, it still exists; and the convener of the trades has the charge of keeping it. Very soon after the discovery of America, the venereal disease made its way to Edinburgh. As early as 1497, only 5 years after the voyage of

Columbus, it was looked upon as a most dreadful plague; and the unhappy persons affected with it were separated as effectually as possible from society. The place of their exile was Inchkeith, a small island in the Forth, between Leith and Kirkcaldy. By the overthrow of James IV. at the battle of Flodden, Edinburgh was overwhelmed with grief, that monarch having been attended in his unfortunate expedition by the Earl of Angus, then provost, with the rest of the magistrates, and a number of the principal inhabitants, most of whom perished in the battle. The inhabitants, alarmed for the safety of their city, enacted that every fourth man should keep watch at night; the fortifications of the town were renewed, the wall being also extended in such a manner as to inclose the Grass-market, and the field on which Heriot's Hospital, the Grey Friars Church, and Charity Workhouse, stand. On the east side it was made to inclose the College, Infirmary, and High School; after which, turning to the north, it met the old wall at the Netherbow-port. After this alarm was over, the inhabitants were gradually relieved from the trouble of watching at night, and a certain number of militia appointed to prevent disturbances; who continue to this day under the name of the *Town Guard*. Before these new inclosures, most of the principal people lived in the Cowgate without the wall; and the burying-place was situated where the Parliament Close now is. About this period too the city was almost depopulated by a dreadful plague; so that to stop if possible the progress of the infection, all houses and shops were shut up for 14 days, and some, where infected persons had died, were pulled down altogether. In 1504, the tract of ground called the *Burrough Muir* was totally overgrown with wood, though now it affords not the smallest vestige of having been in such a state. So great was the quantity at that time, however, that it was enacted by the town-council, that whoever inclined to purchase as much wood as was sufficient to make a new front for their house, might extend it 7 feet into the street. Thus the city was in a short time filled with houses of wood instead of stone; by which, besides the inconvenience of having the street narrowed 14 feet, and the beauty of the whole entirely marred, it became much more liable to accidents by fire. In 1542, a war with England having commenced through the treachery of cardinal Beaton, an English fleet of 200 sail entered the Forth; and having landed their forces, quickly made themselves masters of the towns of Leith and Edinburgh. They next attacked the castle, but were repulsed from it with loss; and by this they were so enraged, that they not only destroyed the towns of Edinburgh and Leith, but laid waste the country for a great way round.—These towns, however, speedily recovered from their ruinous state; and, in 1547, Leith was again burned by the English after the battle of Pinkie, but Edinburgh was spared. Several disturbances happened in this capital at the time of the Reformation, of which an account is given under the article SCOTLAND; but none of them greatly affected the city till 1570, at which time there was a civil war on account of Q. Mary's forced resignation. The regent, who was one

the contending parties, bought the castle from the pious governor, Balfour, for 5000*l.* and the priory of Pittenweem. He did not, however, long enjoy the fruits of this infamous bargain. Sir William Kirkaldy, the new governor, a man of great integrity and bravery, declared for the Queen. The city in the mean time was sometimes in the hands of one party and sometimes of another; during which contentions, the inhabitants, as may easily be imagined, suffered extremely. In 1570, Q. Elizabeth sent a body of 1000 foot and 100 horse, under the command of Sir William Drury, to assist the king's party. The castle was summoned to surrender; and several skirmishes happened during the space of two years, in which a kind of predatory war was carried on. At last a truce was agreed on till 1573; and this opportunity the Earl of Morton, now regent, made use of, to build two bulwarks across the high-street, nearly opposite to the tolbooth, to defend the city from the fire of the castle. On the 1st of January, early in the morning, the governor began to cannonade the city. Some of the cannon were pointed against the fish-market, then held on the high-street; and the bullets falling among the fishes, scattered them about in a surprising manner, and even drove them up so high in the air, that they fell down upon the tops of the houses. This unusual spectacle having brought a number of people out of their houses, some of them were killed and others dangerously wounded. Some little time afterwards, several houses were set on fire by shot from the castle, and burned to the ground; which greatly enraged the people against the governor.—A treaty was at last concluded between the leaders of the opposite factions; but Kirkaldy refused to be comprehended in it. The regent

thereupon solicited the assistance of Q. Elizabeth, and Sir W. Drury was again sent into Scotland with 1500 foot and a train of artillery. The castle was now besieged in form, and batteries raised against it in different places. The governor defended himself with great bravery for 33 days; but finding most of the fortifications demolished, the wall choked up with rubbish, and all supplies of water cut off, he was obliged to surrender. The English general, in the name of his mistress, promised him honourable treatment; but the Q. of England shamefully gave him up to the regent, by whom he was hanged. Soon after this, violent tumults took place, not only in Edinburgh, but through the whole kingdom. The foundation of these disturbances, and indeed of most others which have ever happened in Christendom, was that pernicious maxim of Popery, that the church is independent of the state. It is not to be supposed that this maxim was applicable to the sovereign; but such was the attachment of the people to the doctrines of the clergy, that K. James found himself obliged to compound matters with them. This, however, affected the purpose but very indifferently; and a still more violent uproar was excited. The King was then sitting in the Court of Session, which was held in the Tolbooth, when a petition was presented to him by six persons, lamenting the troubles which threatened religion; and being treated with very little respect, by Robert Drume

a minister, the king asked who they were that dared to convene against his proclamation? He was answered by Lord Lindsay, that they dared to do more, and would not suffer religion to be overthrown. On this the king perceiving a number of people crowding into the room, withdrew into another without making any reply, ordering the door to be shut. By this the petitioners were so much enraged, that on their return to the church the most serious resolutions were taken; and had it not been for the activity of Sir Alexander Home the provost, and Mr Watt the deacon convener, who assembled the crafts in the king's behalf, it is thought the door would have been forced, and an end put to his life. This affront was so much resented by the king, that he declared Edinburgh an unfit place of residence for the court or administration of justice; and commanded the Lords of Session, the inferior judges, and the nobility and barons, to retire from Edinburgh, and not to return without express licence. This unexpected declaration threw the whole town into consternation, and brought back the magistrates and principal inhabitants to a sense of their duty. With the clergy it was far otherwise. They railed furiously against the king, and endeavouring to persuade the people to take up arms, the magistrates were ordered to imprison them; but they escaped by a timely flight. A deputation of the most respectable burghesses was then sent to the king at Linlithgow, to mitigate his resentment. But he refused to be pacified; and on the 31st of Dec. 1596, entered the town between two rows of his soldiers who lined the streets, while the citizens were commanded to keep within their houses. A convention of the estates was held within the Tolbooth, before whom the magistrates made the most abject submissions, but all in vain. The convention declared the late tumult to be high treason; and ordained, that if the magistrates did not find out the authors, the city should be subjected to all the penalties due to that crime. It was even proposed to raze the town to the foundation, and erect a pillar where it had stood, as a monument of its crimes! The inhabitants were now reduced to despair; but Q. Elizabeth interposing, the king abated somewhat of his rigour. A criminal prosecution, however, was commenced, and the town council were commanded to appear at Perth by the 1st of Feb. On their petition, the time was prolonged to the 1st of March; and the attendance of 13 of the counsellors was declared sufficient, provided they had a proper commission from the rest. The trial commenced on the 3rd day of the month; but one of the number having failed in his attendance, the cause was immediately decided against the council: they were declared rebels, and their revenues forfeited. For 15 days the city continued in the utmost confusion; but at last, on their offering to submit to the king's mercy, the community were restored on the following conditions, which they had formerly proffered: That they should continue to make a most diligent search for the authors of the tumult, in order to bring them to condign punishment; that none of the seditious ministers should be allowed to return to their charges, and no others admitted

admitted without his majesty's consent; and that in the election of their magistrates they should present a list of candidates to the king and his lords of council and session, whom his Majesty and their lordships might approve or reject at pleasure. To these conditions the King now added some others; viz. that the houses which had been possessed by the ministers should be delivered up to the King; and that the clergymen should afterwards live dispersed through the town, every one in his own parish: That the town-council house should be appointed for accommodating the court of exchequer; and that the town should become bound for the safety of the lords of session from any attempts of the burghers, under a penalty of 40,000 merks; and, lastly, that the town should immediately pay 20,000 merks to the king. Upon these terms a reconciliation took place; which appears to have been very complete, as the king not only allowed the degraded ministers to be replaced, but in 1610, conferred a mark of his favour on the town, by allowing the provost to have a sword of state carried before him, and the magistrates to wear gowns on public occasions. In 1618 he paid his last visit to this city, when he was received with the most extravagant pomp and magnificence. The events which, during this period, regarded the internal police of the city, were principally the following. After the unfortunate battle at Pinkie, the magistrates, presuming that now their power was enlarged by the common calamity, proceeded in a very arbitrary manner; forcing the inhabitants to furnish materials for the public works; enjoining merchants to bring home silver to be coined at the mint; and ordering lanterns to be hung out at proper places to burn till nine at night, &c. Another invasion from England being apprehended in 1558, the city raised 1450 men for its defence, among whom there are said to have been 200 tailors. During the disturbances which happened at the reformation, and of which an account will be found under the article SCOTLAND, it was enacted, that the figure of St Giles should be cut out of the town's standard, and that of a thistle inserted in its place. It was likewise enacted, that none but those who professed the reformed religion should serve in any office whatever; and a pillar was erected in the North Loch, for the purpose of ducking fornicators. In 1595, the boys of the High School rose against their masters; and such was the barbarism of those days, that one of them shot a magistrate with a pistol, who had come along with the rest to reduce them to obedience. The reason of the uproar was, that they were in that year refused two vacations, which had been customary in former times: they were, however, at last obliged to submit, and ever since have been allowed only one for about six weeks in autumn. The house of one of the bailies was also assaulted by the tradesmen's sons, assisted by journeymen who had not received the freedom of the town: he escaped with his life, but the offenders were banished the city for ever.

(10.) EDINBURGH, HISTORY OF, TILL THE UNION. In the beginning of the reign of Charles I. a perfect harmony seems to have subsisted between the court and the city; for in 1627 king

Charles I. presented the city with a new sword and gown to be worn by the provost. Next year he paid a visit to this capital, and was received by the magistrates in a most pompous manner; but soon after this the disturbances arose, which ended in the death of that unfortunate monarch. These commenced on an attempt of Charles to introduce Episcopacy into the kingdom; and the first step towards this was the erection of the three Lothians and part of Berwick into a diocese, Edinburgh being the episcopal seat, and the church of St Giles the cathedral. Much disturbance was occasioned in 1637, by the first attempt to read the prayer book there; but though the attempt was given over, the minds of the people were not to be quelled. Next winter they resorted to town in such multitudes, that the privy council thought proper to publish two acts; by one of which the people were commanded, under severe penalties to leave the town in 24 hours; and by the other the court of session was removed to Linlithgow. The populace and their leaders were so much enraged by the latter, that lord Traquair and son of the bishops narrowly escaped with their lives; and next year matters became still more serious. For now, the king having provoked his subjects throughout all Scotland with the innovations attempted in religion, Edinburgh was made the general place of rendezvous, and the most formidable associations took place; an account of which will be found under the article ENGLAND. Every town in Scotland had a copy; and that which belonged to Edinburgh, crowded with 5000 names is still preserved among the records of the city. Notwithstanding this disagreement, however, the king once more visited Edinburgh in 1641, and was entertained by the magistrates at an expense of 12,000l. Scots. It does not appear that at this time the city was in any way particularly concerned with the disturbances which followed, either throughout the remainder of the reign of Charles I. the commonwealth, or the reign of Charles II. In 1680 the duke of York with his duchess, the princess Anne, and the whole court of Scotland were entertained by the city in the Parliament House, at the expense of 15,000l. Scots. At the same time it is said, that the scheme of building a bridge over the North Loch was first projected by the duke. From the time that king James VI. paid his last visit to Edinburgh in 1618, till the union in 1707, a considerable number of private regulations were made by the magistrates; some of them evidently calculated for the good of the city, others strongly characteristic of that violent spirit of fanaticism which prevailed so much in the last century. Among the former was an act passed in 1621, that the houses, instead of being covered with straw or boards, should have tiled roofs constructed of slate, tiles, or lead. This act was renewed in 1667; and in 1698 an act passed regulating their height also. By this they were restrained to five stories, and the thickness of the wall determined to be three feet at bottom. In 1684 a lantern with a candle was ordered to be hung out in the first floor of every house to light the streets at night; and two coaches with four horses each were ordered to be brought for the use of the magistrates. In 1681 the court of

the discontinued its fittings in summer: but as this was attended with inconvenience, an act was passed for their restoration, which has been continued ever since. During the civil war in 1649, the city was visited by the plague, which is the last time that dreadful distemper made its appearance in this country. The infection was so violent, that the city was almost depopulated, the prisoners were discharged from the tolbooth, and an act was passed for giving Dr Joannes Politius a salary of 50l. Scots per month, for visiting the infected. In 1677 the first coffee-houses were allowed to be opened, but none without a licence: and the same year the town-council regulated the price of penny weddings; ordaining the men to pay no more than 3 shillings, and the women 18 pence; very extravagant prices having been exacted before. In consequence of distinction to these salutary acts we may see those which show an extravagant desire of preserving the appearance of virtue in the female sex, as if it had been possible for others to inspire them with virtuous notions, if they had not imbibed them of themselves. In 1633 an act of council was passed, by which women were forbidden to wear plaids over their faces, under a penalty of 5l. Scots and the forfeiture of the plaid for the first fault. Banishment was the punishment of the 3d. The reason assigned was, that matrons were not known from strumpets and loose women, while the plaid continued to be worn over the face. This act was renewed in 1637 and 1638. Successive town-councils continued to show the same regard to these matters; for in 1695 they enacted, that no inn-keeper, vintner, or ale-feller, should for the future employ women as waiters or servants, under the penalty of 5s. sterling for each.

(II.) EDINBURGH, HISTORY OF, TO THE PRESENT TIME. The union, in 1707, had almost produced a war between the two kingdoms, which it was designed to unite; and on that occasion Edinburgh became a scene of the most violent disturbances, of which an account will be found under ENGLAND. During the time the act was passing, it was found absolutely necessary for the guards and 4 regiments of foot to do duty in the city. The disturbances were augmented by the disagreement of the two parties in parliament; and notwithstanding the victory gained by the court party, Sir Patrick Johnston the provost, who voted for the union, was obliged afterwards to leave the country. In 1715 the city remained faithful to the royal cause, and proper measures were taken for its defence. A committee of safety was appointed, the city guard increased, and 400 men raised at the expence of the town. The trained bands likewise were ordered out, 100 of whom mounted guard every night: by which precautions the rebels were prevented from attempting the city: they however made themselves masters of the citadel of Leith; but fearing an attack from the duke of Argyle, they abandoned it in the night. A scheme was even laid for becoming masters of the castle of Edinburgh; for which purpose they bribed a serjeant to place their scaling ladders. Thus some of the rebels got up to the top of the walls before any alarm was given; but in the mean time the plot being discovered by the serjeant's wife, her husband was

hanged over the place where he had attempted to introduce the rebels. The expence of the armament, which the city had been at on this occasion, amounted to about 1700l. which was repaid by government in 1721. The loyalty of the city was still farther remarkable in 1725, when disturbances were excited in all parts of the kingdom, particularly in the city of Glasgow, concerning the excise bill; for all remained quiet in Edinburgh; and so remarkable was the tranquillity in the metropolis, that government afterwards returned thanks to the magistrates for it. In 1736, however, the city again fell under the royal displeasure, on the following account. Two smugglers, having been detected in stealing their own goods out of the custom-house, were condemned to be hanged. The crime was looked upon as trivial; and therefore a general murmur prevailed among the populace, which was no doubt heightened by the following accident. At that time it had been customary for persons condemned to die to be carried each Sunday to the church, called from that circumstance the *Tolbooth Church*. The two prisoners just mentioned were conducted in the usual way, guarded by three soldiers, to prevent their making their escape: but having once gone thither a little before the congregation met, one of the prisoners seized one of the guards in each hand, and the other in his teeth, calling out to his companion to run; which he immediately did with such speed, that he soon got out of sight, and was never heard of afterwards. The person who had thus procured the life of his companion without regard to his own, became an object of general compassion; and of course, when led to the place of execution, the guard were severely pelted by the mob, and some of them, according to the testimony of the witnesses who were sworn on the occasion, pretty much wounded. By this Captain Porteous, who commanded the guard, was so much provoked, that he gave orders to fire, by which six people were killed and eleven wounded. The evidence, however, of the fact, that the orders to fire were given, appears not to have been altogether unexceptionable; nevertheless, on this he was tried and condemned to be executed. At that time the king was at Hanover, having left the regency in the hands of the queen; and the case of the unfortunate Porteous having been represented to her, she granted him a reprieve: but such was the inveteracy of the people against him, that they determined not to allow him to avail himself of the royal clemency. On the day that had been appointed for his execution, therefore, a number of people assembled, shut the gates of the city, and burnt the door of the prison. They then took out Porteous, whom it was found impossible to rescue out of their hands, though every method that the magistrates could take for that purpose, in such a confusion was made use of. It was even proved, that the member of parliament went to the commander in chief, and requested that he would send a party of soldiers to quell the disturbance, but was absolutely denied this request, because he could not produce a written order from the provost to this purport; which, in the confusion then existing in the city, could neither have been expected to be given by the

provost, nor would it have been safe for any person to have carried it about him. Thus the unhappy victim was left in the hands of his executioners; and being dragged by them to the grass market, the usual place of execution, was hanged on a dyers sign-post. As they had not brought a rope along with them, they broke open a shop where they knew they were to be had; and having taken out what they wanted, left the money upon the table, and retired without committing any other disorder. They even conducted matters with such regularity, that they allowed Porteous 15 minutes to pray and sing psalms before hanging him. Such an atrocious insult on government could not but be highly resented. A royal proclamation was issued, offering a pardon to any accomplice, and a reward of 200l. to any person who would discover one of those concerned. The proclamation was ordered to be read from every pulpit in Scotland the first Sunday of every month for a twelvemonth: but so divided were the people in their opinions about this matter, that many of the clergy hesitated exceedingly about complying with the royal order; many of them absolutely refused to do it, by which they were brought in danger of being turned out of their livings; while those who complied were rendered so unpopular, that their situation was soon much worse than that of the others, who were never troubled for their non-compliance. All the efforts of government, however, were insufficient to produce any discovery; by which the court were still more exasperated: and it was now determined to execute vengeance on the magistrates and the city at large. Alexander Wilson, the provost, was imprisoned 3 weeks before he could be admitted to bail; after which, he and the four baillies, with the lords of justiciary, were ordered to attend the house of peers at London. On their arrival there, a debate ensued, whether the lords should attend in their robes or not? but at last it was agreed, that they should attend in their robes at the bar. This, however, was refused by their lordships, who insisted that they should be examined within the bar; upon which the affair of their examination was dropped altogether. A bill at last passed both houses, by which it was enacted, that the city of Edinburgh should be fined in 2000l. for the benefit of Porteous's widow (though she was prevailed upon to accept of 1500l. for the whole); and the provost was declared incapable of ever serving government again in any capacity whatever. To prevent any such catastrophe in time coming, the town-council enacted, that, on the first appearance of an insurrection, the chief officers in the different corporations and societies should repair to the council, to receive orders for the quelling of the tumult, under the penalty of 8l. 6s. 8d. for each omission. In 1745, the city was invested by the Pretender's army; and on the 17th Sep. the Netherbow gate being opened to let a coach pass, a party of Highlanders, who had reached the gate undiscovered, rushed in, and took possession of the city. The inhabitants were commanded to deliver up their arms at the palace of Holyrood-house; a certain quantity of military stores was required from the city, under pain of military execution; and an assessment of 2s. 6d. the pound

was imposed upon the *real* rents within the city and liberties, for defraying that expence. The Pretender's army guarded all the avenues to the castle; but no signs of hostility ensued till the 15th of the month, when the garrison being alarmed from some unknown cause, a number of cannon were discharged at the guard placed at the West-port, but with very little effect. This gave occasion to an order to the guard at the weigh-house, to prevent all intercourse between the city and castle; and then the governor acquainted the provost by letter, that unless the communication was preserved, he would be obliged to dislodge the guard by artillery. A deputation was next sent to the Pretender; acquainting him with the danger the city was in, and intreating him to withdraw the guard. With this he refused to comply; and the Highland centinels firing at some people who were carrying provisions into the castle, a pretty smart cannonading ensued, which set on fire several houses, killed some people, and did other damage. The pretender then consented to dismiss the guard, and the cannonading ceased. After the battle of Culloden, (see CULLODEN,) the provost of Edinburgh stood a very long and severe trial, first at London and then at Edinburgh, for not defending the city against the rebels; which, from the situation and extent of the walls, every one must have seen to be impossible. During this trial a very uncommon circumstance occurred; the jury having sat two days, insisted that they could sit no longer, and prayed for a short respite. As the urgency of the case was apparent, and both parties agreed, the court, after long reasoning, adjourned till the day following, taking the jury bound under a penalty of 500l. each; when the court continued sitting two days longer, and the jury were one day inclosed. The event was, that the provost was acquitted. After the battle of Culloden the duke of Cumberland caused 14 of the rebels standards to be burned at the cross; that of the pretender was carried by the common executioner, the others by chimney-sweepers; the heralds proclaiming the name of the commanders to whom they belonged, as they were thrown into the fire. At this time the city of Edinburgh felt a temporary inconvenience from the election of their magistrates not having taken place at the usual time; so that it became necessary to apply to the king for the restoration of the government of the city. This was readily granted, the burghesses being allowed a poll; after which an entire new set of magistrates was returned, all friends to the house of Hanover; and soon after the freedom of the city in a gold box was presented to the duke of Cumberland. With these transactions all interferences betwixt government and the metropolis of Scotland were ended; the rest of its history therefore only consists of internal occurrences, the regulations made by its magistrates, their applications to government for leave to improve it, and the execution of these improvements of which we shall now give a brief detail. In 1716, the city first bestowed a settled salary on the provost, in order to enable him to support the dignity of first magistrate. This was at first 300l. but has since been augmented to 500l. which the lordship still enjoys. In 1718, it was recommen-

ed to the magistrates to distinguish themselves by wearing coats of black velvet, for which they were allowed 10l. but this act being abrogated in 1754, gold chains were assigned as badges of their office, which they still continue to wear. Provost Kincaid died in office in 1777; which being a very rare accident, perhaps the only one of the kind to be met with in the records of Edinburgh, he was buried with great solemnity, and a vast concourse of people attended, consisting of the magistrates and town-council, and the lords of Session and Justiciary, in their robes; the faculty of advocates, writers to the signet, ministers, professors of the university, members of the merchant company, incorporations and societies, captains of the trained bands, and constables, besides the relations of the late provost, all regularly arranged, in the utmost order. Tumults have been frequent in Edinburgh, chiefly on account of the dearth of provisions. In 1740, Bell's mills were first attacked by the populace, and afterwards Leith also: nor could the rioters be dispersed till the military had fired among them, and wounded 3, of whom one died; and it was found necessary to order some dragoons into the city to preserve tranquillity. In 1742 another violent tumult took place, owing to a custom of stealing dead bodies from their graves for anatomical purposes, which had then become common. The populace beat to arms, threatened destruction to the surgeons; and in spite of all the efforts of the magistrates, demolished the house of the beadle at St Cuthbert's. In 1766, new disturbances, which required the assistance of the military, took place: the cause at this time was the impressing of men for the war then commencing with France. A disturbance was likewise excited in 1760. This was occasioned by the footmen, who till then were allowed to follow their masters into the play-house, and now took upon them to disturb the entertainment of the company; the consequence of which was, that they were turned out, and have ever since been obliged to wait for their masters. In 1763 and 1764, the tumults on account of the price of provisions were renewed; many of the meal-mongers had their houses broken open and their shops destroyed. The magistrates, as usual, were obliged to call in a party of dragoons to quell the disturbance; but to put an effectual stop to such proceedings for the future, they gave security, that people who brought grain or provisions into the market should be secured in their property. Since that time there have been no tumults directly on the account of provisions; though in 1784 a terrible riot took place at Canonmills, where the mob attacked a distillery on a supposition, that the distillation enhanced the price of meal by using unmalted grain. The attack was repelled by the servants of the distillery; but the riot was not quelled until the sheriff called the soldiers from the castle to his assistance. One man was killed by the fire of a servant of the distillery, and several of the rioters were afterwards secured and punished. In 1773 and 1779 two very alarming disturbances happened, which threatened a great deal of bloodshed, though happily they were terminated without any. The first was a mutiny of the earl of Selkirk's Highland regiment, who were at this

time quartered in the castle. These, having been ordered to embark, for some reason or other unanimously refused, and posted themselves on the top of Arthur's Seat, where they continued for two days. Troops were collected to prevent their escape, and the inhabitants were ordered to keep within doors at the first toll of the great bell, which was to be a signal of violence about to take place; but fortunately all the fears, naturally arising from the expectation of this event, were dissipated by an accommodation. The other happened on account of the attempt to repeal the penal laws against the Papists; and seemed much more alarming than the former, as being the effect of a premeditated scheme, and determined resolution to oppose government. On the 2d of Feb. 1779, a mob assembled in the evening, burned a Popish chapel, and plundered another. Next day they renewed their depredations; destroying and carrying off the books, furniture, &c. of several popish priests and others of that persuasion. The riot continued all that day, though the assistance of the military was called in; but happily no lives were lost, nor was there any firing. The city was afterwards obliged to make good the damages sustained by the Catholics on this occasion, which was estimated at L. 1500. In April 1780, an unlucky accident happened at Leith. About 50 Highland recruits having refused to embark, a party of the South Fencibles was sent to take them prisoners. Unexpectedly, however, the Highlanders stood upon their defence; when, after some words, a firing commenced on both sides, and about one half of the Highlanders were killed and wounded, the remainder being taken prisoners and carried to the castle. Captain Mansfield and two or three privates were killed in this affray.—The only riot of any consequence, that has since occurred in the city, began upon the evening of the 4th of June 1792, when upon occasion of the celebration of his majesty's birth-day a great number of idle people commonly assemble in the streets for diversion. Their diversion at this time, however, was attended with melancholy consequences. From amusing themselves with burning what they stiled the effigy of a certain great man, they proceeded to break some gentlemen's windows in George's Square. The military were called in to quell the riot, and being ordered to fire, two or three persons were killed and several more wounded. The only justiciary trial that followed was that of a brewer's servant, commonly called *Barm Jock*, who, however, was acquitted.—We cannot close our history of the metropolis, without just mentioning the three *Conventions of the Friends of the People* that were held in it, in Dec. 1792, and in April and Oct. 1793. All the three were held and adjourned without the interference of the civil magistrate, excepting that Mr Muir, advocate, a member of the first convention, was tried, among other things, for reading an address from the *United Irishmen* in it. But the members of the 3d convention, having refused their meetings, in Nov. upon the arrival of several members of the London Corresponding Society, from that metropolis, and having afterwards assumed the title of the *British Convention*, and adopted some resolutions that were deemed seditious, Thomas

Elder, Esq; then Lord Provost, and the other magistrates, thought proper to interpose their authority and disperse the meeting. The consequences that followed, by the trials and exile of Messrs Skirving, Margaret and Gerrald, with the outlawry of Messrs Candler and Sinclair, the execution of Watt, &c. are well known.

(12.) EDINBURGH, HOSPITALS AND CHARITABLE INSTITUTIONS IN. I. Of these the most magnificent in Scotland, or perhaps in Europe, is HERIOT'S HOSPITAL, which is finely situated on the W. end of the S. hill, nearly opposite to the castle. It owes its foundation to George Heriot, goldsmith to James VI. who at his death, left to the magistrates and ministers of Edinburgh, 29,321. 10s. 1½d. "for the maintenance, relief, and bringing up of so many poor and fatherless boys, freemen's sons of the town of Edinburgh," as the above sum should be sufficient for. It was founded in July 1628, according to a plan of Inigo Jones; but the work being interrupted by the civil wars, it was not finished till 1650. The expense of the building is said to have been upwards of 27,000l. and the hospital is now possessed of an income of about 3500l. a year; though this cannot be absolutely ascertained, as the rents are paid in grain, and of course must be fluctuating. It stands on a rising ground to the SW. of the city, and is a square of 162 feet without, having a court 94 feet square in the inside, with piazzas on three of the sides. There is a spire with a clock over the gateway, and each corner of the building is ornamented with turrets; but notwithstanding the magnificent appearance of the outside, the inner part is far from being convenient. There is a statue of the founder over the gateway, in the dress of the times, and a very good painting of him in the governor's room, with a picture of the late treasurer Mr Carmichael. There is a chapel 61 feet long and 22 broad, which has been lately repaired. When Cromwell took possession of Edinburgh after the battle of Dunbar, he quartered his sick and wounded soldiers in this hospital. It was applied to the same purpose till the year 1658, when general Monk, at the request of the governors removed the soldiers; and on the 11th of April 1659, it was opened for the reception of boys, 30 of whom were admitted into it. In August they were increased to 40; and in 1661, to 52. In 1733 the number was raised to 130, and in 1763 to 140; but since that time it has decreased to 125. In this hospital the boys are taught reading, writing, arithmetic, and the Latin tongue. With such as choose to follow any kind of trade, an apprentice fee of 30l. is given when they leave the hospital; and those who choose an academical education, have an annuity of 10l. a year for 4 years. The whole is managed by a governor, house-keeper, and school-masters, who are under the superintendence of the treasurer. II. WATSON'S HOSPITAL is so named from its founder, George Watson, who, dying a bachelor in 1723, left 12,000l. for the maintenance and education of the children and grand-children of decayed members of the merchant company of Edinburgh. The scheme, however, was not put in execution till 1738, when the sum originally left had accumulated to 20,000l. The present building was then erected, in which

about 60 boys are maintained and educated. It is much less magnificent than Heriot's hospital, but the building is far from being despicable. It stands on the S. side of the city, W. of George's Square, and S. of Heriot's hospital; and was erected at the expense of 5000l. Its present revenue is about 2000l. It is under the management of the master, assistants, and treasurer of the Merchant Company, 4 old bailies, the old dean of guild, and the two ministers of the old church. The boys are genteelly clothed and liberally educated. Such as choose an university education are allowed 10l. per annum for 5 years: those who go to trades have 25l. allowed for their apprentice fee; and at the age of 25 years, if they have behaved properly, and not contracted marriage without consent of the governors, they receive a bounty of 50l. The boys are under the immediate inspection of the treasurer, school-master, and house-keeper. III. THE MERCHANTS MAIDEN HOSPITAL was established by voluntary contribution about the end of the last century, for the maintenance of young girls, daughters of the merchants burghesses of Edinburgh. The governors were erected into a body corporate, by act of parliament, in 1707. The annual revenue amounts to 1400l. About 80 girls are maintained in it; the majority of whom, on leaving the house, receive 31. 6s. 8d. But for the encouragement of merit, those who are found superior to the generality in the acquisition of their education, are allowed 81. 6s. 8d. out of the funds of the hospital. The profits arising from work done in the house are also divided among the girls, according to their industry. IV. THE TRADES MAIDEN HOSPITAL was founded in 1704 by the incorporation of Edinburgh, for the maintenance of the daughters of decayed members, on a plan similar to that of the merchant's hospital. To this, as well as to the former, Mrs Mary Erskine, a widow gentlewoman of the family of Marr, contributed so liberally, that she was by the governors styled *joint foundress* of the hospital. Sixty girls are maintained in the house, who pay of entry money 11. 13s. 4d. and, when they leave it, receive a bounty of 51. 11s. 1½d. The revenues are estimated at 650l. a year. V. THE ORPHAN HOSPITAL was planned in 1732, by Andrew Gairdner merchant, and other inhabitants. It was promoted by the society for propagating Christian knowledge, by other societies, by voluntary subscriptions, and a collection at the church-doors.—In 1733, the manager hired a house, took in 35 orphans, maintained them, gave them instructions in reading and writing, and taught them the weaving business. In 1735, they were erected into a body corporate by the town of Edinburgh; and in 1742, they obtained a charter of erection from K. George III. appointing most of the great officers of state in Scotland, and the heads of the different societies in Edinburgh, members of this corporation; with powers to hold real property to the amount of 1000l. a year. The revenue is inconsiderable, but the institution is supported by the contributions of charitable persons. The funds were considerably increased, between 1740 and 1770, by the collections drawn from the numerous and crowded audiences, who attended the sermons delivered in

the Orphan Hospital Park, by the late celebrated field preacher, George Whitefield, as well as those of the rev. Joseph Townshend, rector of Pewsey in Wiltshire. Into this hospital orphans are received from all parts of the kingdom. None are admitted under 7, nor continue in it after 14, years of age. At present (1798) about 160 orphans are maintained in it. This hospital is situated below the NE. side of the north bridge; and is a handsome building, consisting of a body and two wings, with a neat spire, furnished with a clock and two bells. The philanthropic Mr Howard reckoned this institution one of the most useful charities in Europe, and a pattern for all others of the kind. The funds have been considerably increased, and the management of the hospital, as well as the building itself greatly improved, through the attention and exertions of Mr Thomas Tod, the late treasurer. VI. The TRINITY HOSPITAL was originally founded, and amply endowed by Q. Margaret, wife of K. James II. At the Restoration, it was stripped of its revenues; but the regent afterwards bestowed them on the provost of Edinburgh, who gave them to the citizens for the use of the poor. In 1585, the town-council purchased from Robert Pont, at that time provost of Trinity college, his interest in these subjects; and the transaction was afterwards ratified by James VI. The hospital was then repaired, and appointed for the reception of poor old burghesses, their wives, and unmarried children, not under 50 years of age. In 1700, this hospital maintained 54 persons; but, since that time, the number has decreased.—The revenue consists in a real estate of lands and houses, the gross rents of which are £61. a year; and 5500 l. lent out in bonds at 4 per cent. This hospital is situated at the foot of Leith Wynd, and maintains about 54 of both sexes, who are comfortably lodged, each having a room for themselves. They are supplied with meat or boiled meat every day for dinner, have money allowed them for clothes, and likewise a small sum for pocket money. There is a small library for their amusement, and they have a chapel for their prayers. There are some out-pensioners who have 61. a-year, but these are discouraged by the governors. The funds are under the management of the town-council; and they deserve to be increased, as the institution is, beyond controversy, one of the best asylums for aged persons in Europe. VII. The CHARITY WORKHOUSE was erected in 1743, by voluntary contributions. It is a large plain building, on the S. side of the city, wherein the poor are employed, and are allowed out of every shilling they earn. The expense of this institution is supposed not to be less than 4000 l. annually; as about 700 persons of both sexes, including children, are maintained here, each of whom cannot be reckoned to cost less than 4 l. 10 s. per annum; and there are besides 300 out-pensioners. The only permanent fund for defraying this expense is a tax of two per cent. on the valued rents of the city, which was paid about 6000 l. annually; and other funds were added about 400 l. The rest is derived from collections at the church doors and voluntary contributions; but as these always fall short of what is requisite, recourse is frequently had to extraor-

dinary collections. The sum arising from the rents of the city, however, is constantly increasing; but the members of the College of Justice are exempted from the tax. There are two other charity workhouses in the suburbs, much on the same plan with that now described; one in the Canongate, and the other in St Cuthbert's or West Kirk parish. There are several other charitable establishments in Edinburgh, which, though not calculated to decorate the city by public buildings, are highly worthy of being mentioned. I. Captain William Horn left 3500 l. in trust to the magistrates; the annual profits to be divided on Christmas day to poor out-day labourers, who must at that season of the year be destitute of employment; 5 l. to be given to those who have large families, and 50 sh. to those who have smaller. II. Robert Johnston, LL.D. of London, in 1640, left 3000 l. to the poor of the city; 1000 l. to be employed in setting them to work, another 1000 l. to clothe the boys in Heriot's Hospital, and the third 1000 l. to bursters at the university. III. About 1700 John Strachan left his estate of Craigmock, now worth above 300 l. a-year, to be disposed of in small sums to poor old people not under 65 years of age, and to orphans not above 12. See CRAIGCROOK. IV. There are also a society for the support of the industrious poor; V. another for the indigent sick; and VI. another for the industrious blind: (See BLIND, § 21, and SOCIETY;) besides many charity schools.

(13.) EDINBURGH, IMPROVEMENTS OF. These began in 1753, when the foundation stone of the Royal Exchange was laid, at which time there was a grand procession, and the greatest concourse of people ever known in Edinburgh. A triumphal arch was erected for the purpose, through which the procession passed, and medals were scattered among the populace. In 1756 the high street was cleared by the removal of the crofs; though many regretted this, as it was a very ancient and elegant building. In the middle it had an unicorn placed on the top of a pillar 20 feet high; but this fine ornament was broken to pieces by the tackle giving way, by which it was attempted to remove it. It is now erected at Drum, a seat belonging to lord Somerville, about four miles from Edinburgh. In 1763 the first stone of the north bridge was laid by provost Drummond; and in 1767 an act of parliament was obtained, for extending the royalty of the city over the fields to the northward, where the New Town is now situated. About the same time a piece of ground upon the south side of the town was purchased by James Brown, Esq; architect, for L. 1200, which, being fenced out for building, gave rise to the increase of the town in that quarter; and this proceeded the more rapidly, as the houses built there were free from the dues imposed upon others subject to the royalty. In 1775, the foundation of the Register Office was laid. In 1785, the project for rendering the access to the town equally easy on both sides was begun to be put in execution, by laying the foundation of the South Bridge. At the same time a great improvement was made, by reducing the height of the street several feet, all the way from the place where the crofs stood to the Netherbow; by which means the ascent is rendered

tendered more easy, not only for carriages, but also for persons who walk on foot. The street was farther cleared by the removal of the town-guard-house, which had long been complained of as an incumbrance. It is also in contemplation to remove the Luckenbooths: and when this is accomplished, with other improvements by which it must necessarily be accompanied, it is believed, no city in Britain will be able to vie with Edinburgh in elegance and beauty. See § 16, 17, 28, & 37.

(14.) EDINBURGH, LAW COURTS HELD IN. The PARLIAMENT HOUSE, in the great hall of which the Scottish parliament used to assemble, is a magnificent building. The hall is 123 feet long, and 42 broad, with a fine arched roof of oak, painted and gilded. In this the lawyers and agents now attend the courts, and single judges styled *Lords Ordinary*, sit to determine causes in the first instance, or to prepare them for the whole court, who sit in an inner room formerly appropriated to the privy council. In a niche of the wall in the outer house, is placed a fine marble statue of president Forbes, erected at the expense of the faculty of advocates. There are also full length portraits of K. William III. Q. Mary II. and Q. Anne, all done by Sir Godfrey Kneller; also of George I. and John and Archibald dukes of Argyle, by Mr Aikman of Cairney. Above stairs are the court of exchequer and treasury chamber, with the different offices belonging to that department; and below is one of the most valuable libraries in Great Britain, belonging to the faculty of advocates. Besides 30,000 printed volumes, there are many scarce and valuable MSS. medals, and coins: here is also an entire mummy in its original chest, presented to the faculty (at the expense of 300l.) by the earl of Morton, late president of the royal society. As these rooms are immediately below the hall where the parliament sit, they are subject to a search by the lord high constable of Scotland ever since the gun-powder plot; and this is specified in the gift from the city to the faculty. This library was founded, in 1682, by Sir George Mackenzie lord advocate. Among other privileges, it is entitled to a copy of every book entered in Stationer's hall. Opposite to the great door, nearly in the middle of the Parliament Close, is a noble equestrian statue of Charles II. the proportions of which are reckoned exceedingly just. Over the entrance are the arms of Scotland, with Mercy and Truth for supporters. The court of session, the supreme tribunal in Scotland, consists of 15 judges, who sit on a circular bench, clothed in purple robes turned up with crimson velvet. Six of these are lords of judiciary, and go the circuit twice a-year; but, in that capacity, they wear scarlet robes turned up with white satin. The baillie court is held in a room, in the outer parliament house, fitted up for the purpose. The sheriff court, and that of the justices of peace for the county, are held in an elegant room, which forms part of the building W. of, and adjoining to the Tolbooth Church. A room on the ground floor of this building is called the *council chamber*, and is appropriated to the use of the magistrates and town council, for ordinary meetings, for examining prisoners lodged in the guard house, and accused of riots, petty larcenies, &c.

(15.) EDINBURGH, MARKETS AND PROVISION OF. This city has a weekly market on Wed. and an annual fair called, Hallow Fair, in Nov. which lasts a week. The markets of Edinburgh are plentifully supplied with all sorts of provisions. Fresh butcher meat, as well as fowl and fish, if the weather permit, may be had every day; and no city can be better supplied with garden stuffs. The Edinburgh strawberries particularly are remarkably large and fine. A remarkable instance of the plenty of provisions with which Edinburgh is supplied was observed in 1781, when several large fleets, all of them in want of necessaries, arrived in the Forth, to the amount of above 600 sail, and having on board at least 20,000 men; yet the increased consumption of provisions, which certainly ensued upon the arrival of so many strangers, made not the least increase in the rate of the markets, inasmuch that several victualling ships, sent down by London merchants, returned without opening their hatches. The city mills are let to the corporation of bakers in Edinburgh; and the bread made in the city is remarkable for its goodness.

(16.) EDINBURGH, NEW TOWN OF. The New Town was projected in 1552; but as the magistrates could not then procure an extension of the royalty, the execution of the design was suspended for some time. In 1767, an act was obtained, by which the royalty was extended over the fields to the N. of the city; upon which advertisements were published by the magistrates desiring proper plans to be given in. Plans were given in accordingly, and that designed by James Craig, architect, was adopted. Immediately afterwards, people were invited to purchase lots from the town council; and such as purchased became bound to conform to the rules of the plan. In the mean time, however, the town council had secretly reserved to themselves a privilege of departing from their own plan; which they afterwards made use of in such a manner as produced a law-suit. According to the plan brought forth to the purchasers, a canal was to be made through that place where the North Loch had been and the bank on the N. side of it laid out in terraces: but instead of this, by an act of council liberty was reserved to the town to build up this spot; and therefore when many gentlemen had built genteel houses in the new town on faith of the plan, they were surprised to find the spot appointed for terraces and a canal, beginning to be covered with mean, irregular buildings, and work-houses for tradesmen. This deviation was immediately complained of; but as the magistrates showed no inclination to grant any redress, a prosecution was commenced against them before the Lords of Session. In that court the cause was given against the pursuers, who thereupon appealed to the House of Lords. Here the sentence of the Court of Session was reversed, and the cause remitted to the consideration of their Lordships. At last, after an expensive contest, matters were accommodated. The principal term of accommodation was, that some part of the ground was to be laid out in terraces and a canal; and the time of disposing it in that manner, was referred to the Lord President of the Court of Session and the Lord Chief Baron of the Exchequer.

The fall of part of the bridge, in 1769, proved a very considerable disadvantage to the new town; as it induced a suspicion that the passage, by the bridge, could never be rendered safe. Mr Brown's buildings in George's Square, &c. on the S. side of the town, being free from the duties payable by those within the royalty, tended also to retard the completion of the plan of the New Town. Notwithstanding these discouragements, the New Town is now almost finished; and from the advantages of its situation, the elegance of its buildings, and their being laid out according to a regular plan, it has undoubtedly a superiority over every city in Britain. By its situation, however, it is remarkably exposed to storms of wind, which, at Edinburgh, sometimes rage with uncommon violence. It has 3 principal streets, almost a mile in length, running from E. to W. intersected with cross streets at proper distances. The most northerly, called *Queen's Street*, is 100 feet broad, and commands an extensive prospect of the Forth, the county of Fife, and the shipping in the river. *George Street* is in the middle, and is no less than 115 feet wide. It is terminated at each end by two very elegant and extensive squares; that on the east end is called *St Andrew's Square*; the other *Charlotte's Square*. *Prince's Street* is the small southerly; and extends from the northern extremity of the bridge to the west end of the town. A proposal has been made by a private person of continuing this street a considerable way farther to the westward, to end in a circus. The road to Glasgow and other parts in the west will thus be rendered more easy, as it will then lie along the new bridge over the Water of Leith at Bell's mills, which is much more convenient than that just now in use.

(17.) **EDINBURGH, NORTH & SOUTH BRIDGES** or. (See BRIDGE, § 1, vii.) The NORTH BRIDGE, which forms the main passage of communication between the Old and New Towns, was founded in 1763; (see § 13.) but the contract for building it was not signed till August 21st, 1765. The architect was Mr William Mylne, who agreed with the town-council of Edinburgh to finish the work for 10,140l. and to uphold it for 10 years. It was also to be finished before Martinmas, 1769; but on the 8th of August that year, when the work was nearly completed, the vaults and side walls on the south fell down, and nine people were buried in the ruins, and many more hurt. This misfortune was occasioned by the foundation having been laid, not upon the solid earth, but upon the rubbish of the houses, which had long before been built on the north side of the high street, and which had been thrown out into the hollow to the northward. Of this rubbish there were no less than eight feet between the foundation of the bridge and the solid earth. Besides this deficiency in the foundation, an immense load of earth, which had been laid over the vaults and arches, in order to raise the bridge to a proper level, had no doubt contributed to produce the catastrophe above mentioned.—The bridge was repaired, by pulling down some parts of the side walls, and afterwards rebuilding them; strengthening them with chain bars; removing the quantity of earth laid upon the vaults; and supplying its

place with hollow arches, &c. The whole was supported at the south end by very strong buttresses and counterforts on each side; but on the north it has only a single support.—The whole length of the bridge, from the High-street in the Old Town to Prince's-street in the New, is 1125 feet; the total length of the piers and arches is 310 feet. The width of the three great arches is 72 feet each; of the piers, 134 feet; and of the small arches, each 20 feet. The height of the great arches, from the top of the parapet to the base, is 68 feet; the breadth of the bridge within the wall over the arches is 40 feet, and the breadth at each end 50 feet. The communication betwixt the two towns by this bridge, though very complete and convenient for such as lived in certain parts of either, was yet found insufficient for those who inhabited the western districts. Another bridge being therefore necessary, it was proposed to raise an EARTHEN MOUND, by filling up the valley with the rubbish dug out in making the foundations of houses in the New Town; and so great was the quantity, that this was accomplished so as to be fit for the passage of carriages in 3 years. This mound (says W. Creech, Esq; in his letters to Sir J. Sinclair, annexed to the *Stat. Acc. of Edinburgh*, VI. 384.) "is above 800 feet in length, across a deep morass.—Whilst the mound was forming it sunk at different periods above 80 feet on the W. side, and was again filled up: 1800 cart-loads of earth were, upon an average, laid upon this mound every day. This is a work unrivalled by any but Alexander the Great's at Tyre." He adds, in a note, "The height of this mound, from the surface of the ground, which was formerly a lake, is at the S. end 92 feet, and at the N. end 58. The quantity of earth, that appears at present above the surface, measures 290,167 cubical yards; and it is moderate to say, that half as much is below the surface. This makes the mound, as it stands at present, 435,250 cubical yards of carried earth. Then allowing 3 cart-loads to each cubical yard of earth, there must be 1,305,750 cart-loads in this mound! It began by the magistrates accommodating the builders in the New Town with a place to lay their rubbish; and this noble and useful communication cost the city only the expence of spreading the earth. Had the city paid for digging and driving the earth, it would have cost L. 12,643 : 15 Ster. supposing the digging, carting and driving, as low as 6d per cart-load. It is not yet nearly completed to its full breadth." The SOUTH BRIDGE is directly opposite to the North, so as to make but one street, crossing the High street almost at right angles. It consists of 22 arches of different sizes: but only one of them is visible, viz. the large one over the Cowgate; and even this is small in comparison with those of the North Bridge, being no more than 30 feet wide and 31 feet high. On the S. it terminates at the University on one hand, and the Royal Infirmary on the other. The Tron Church stands at the northern extremity, facing the High-street, and in the middle of *Hunter's Square*, at the head of Blair-street, both named in memory of the late public-spirited magistrate, Sir James Hunter-Blair, who planned these improvements, but did not live to see them executed. On the

W. side of this square the Merchant Company have built a very handsome hall for the occasional meetings of their members. This bridge was erected with a design to give an easy access to the great number of streets and squares on the S. side, as well as to the country on that quarter from whence the city is supplied with coals. South Bridge-street is supposed to be as regular as any in Europe; every house being of the same dimensions, excepting that between every two of the ordinary construction there is one with a pediment on the top, in order to prevent that sameness of appearance which would otherwise take place. So great was the rage for purchasing ground on each side of this bridge for building, that the areas sold by public auction at 50l. per foot in front. By this the community were undoubtedly considerable gainers; whether the proprietors have indemnified themselves for their extraordinary expence, by the vast sale of goods expected to attend the shops in that part of the town, or not. Mr Creech says, these areas "fold higher than perhaps ever was known in any city, (even in Rome, during the most flourishing times of the republic or the empire,) viz. at the rate of no less than L. 96,000 per statute acre; and some areas at the rate of L. 109,000 per acre; and in 1790, the area, at the E. end of Milne's Square, sold for above L. 151,000 per acre."

(18.) EDINBURGH, OBSERVATORY OF, &c. The Observatory is seated on the top of the CALTON HILL, and is furnished with a fine large telescope and other instruments for astronomical observations. The scheme for the erection of it was first adopted in 1736; but the disturbance occasioned by the Porteous mob prevented any thing from being done towards the execution of it at that time. The earl of Morton afterwards gave 100l. for the purpose, and appointed Mr M'Laurin professor of mathematics, together with the principal and some professors of the university, trustees for managing the sum. Mr M'Laurin added to this sum the profits arising from a course of lectures on experimental philosophy; which, with some other small sums, amounted in all to 300l.; but Mr M'Laurin dying, the design was dropped.—Afterwards the money was put into the hands of two persons who became bankrupt; but a considerable dividend being obtained out of their effects, the principal and interest, about 1776, amounted to 400l. A plan of the building was made out by Mr Craig, architect; and the foundation stone was laid by provost Stodart, on the 25th Aug. 1776. About this time, however, Mr Adam, architect, happening to come to Edinburgh, conceived the idea of giving the whole the appearance of a fortification, for which its situation on the top of the Calton-hill was very much adapted. Accordingly a line was marked out for inclosing the limits of the observatory with a wall constructed with buttresses and embrasures, and having Gothic towers at the angles. Thus the money designed for the work was totally exhausted, and the observatory still remains unfinished; nor is there any appearance of its being soon completed either by voluntary subscription or any other way.—A little below the observatory there is a pleasant gravel walk round the Calton hill,

which affords one of the finest prospects imaginable, varying remarkably almost at every step. On this hill is also a burying-ground, which contains a fine monument to the memory of David Hume the historian.

(19.) EDINBURGH, PALACE OF. The palace of HOLY ROOD-HOUSE, though much neglected is the only royal habitation in Scotland, that is not in ruins. It is a handsome square of 230 feet in the inside, surrounded with piazzas. The front, facing the W. consists of two double towers joined by a beautiful low building, adorned with a double balustrade above. The gateway in the middle is decorated with double stone columns supporting a cupola in the middle, representing an imperial crown, with a clock underneath. On the right hand is the great staircase, which leads to the council chamber and the royal apartments. These are large and spacious, but unfurnished in one of them the Scots peers meet, to elect sixteen of their number to represent them in the British parliament. The gallery is on the left hand, and measures 150 feet by 27½. It is adorned with the supposed portraits of all the kings of Scotland, from Fergus I. to James VII. In the apartments of the Duke of Hamilton, which he possesses as hereditary keeper of the palace, queen Mary's bed of crimson damask, bordered with green fringes and tassels, is still to be seen, but almost reduced to rags. Here also strangers are shewn a piece of wainscot hung upon hinges which opens in a trap-stair communicating with the apartments below. Through this passage lord Darnley and the other conspirators rushed in to murder the unhappy Rizzio. Towards the outward door of these apartments are large dark spots on the floor, said to have been occasioned by Rizzio's blood, which could never be washed out. But a very slight degree of skill in chemistry is sufficient to perpetuate a *miracle* of this kind. The lodgings assigned to lord Dunmore, is a picture by Van Dyke, esteemed a masterly performance of king Charles I. and his queen going a-hunting. There are likewise the portraits of their predecessors at full length by Ramsay. The lodgings above the royal apartments are occupied by the duke of Argyle as heritable master of the household. The front of this palace is two stories high; the roof flat; but at each end the front projects, and is ornamented with circular towers at the angles. Here the building is much higher, and the rest of the palace is three stories in height. The NW. towers were built by James V. for his own residence: his name is still to be seen below a niche in one of them. During the minority of queen Mary, this palace was burnt by the English; but soon after repaired and enlarged beyond its present size. At that time it consisted of 5 courts the most westerly of which was the largest. It was bounded on the E. by the front of the palace which occupied the same space it does at present; but the building itself extended further to the NW. At the NW. corner was a strong gate, with Gothic pillars, arches, and towers, part of which was pulled down a few years ago. Great part of the palace was burnt by Cromwell's soldiers; but it was repaired and altered into its present form after the Restoration. The fabric was planned

by William Bruce a celebrated architect, and executed by Robert Mylne mason. The environs of the palace afford an asylum for insolvent debtors; and adjoining to it is a field called *St Anne's Field*; beyond which there is an extensive park, called the *King's Park*, which, with the *Duke's Walk*, and the hills of Arthur's Seat, Salisbury Crags, and St Leonard's Hill, are all within the privilege of the Sanctuary. The abbey church, built by David I. in 1128, has been long in ruins. See HOLY-ROOD-HOUSE. Considerable reparations and improvements have been made upon the palace within these 5 or 6 years, partly at the expense of government, and partly of lord Adam Gordon, who resides in a part of it. The open area or square before the principal gate, has been new paved and laid out to the best advantage; and the bowling green behind it on the E. has been surrounded with a new dike and iron rails. The ex-déant French princes, the count of Artois, and the D. of Angoulesme, have resided in this palace for these two years (1796—8.) past.

(20.) EDINBURGH, PARISHES OF. Edinburgh is divided into ten parishes, of which there are 9 in the old city, named after the 9 oldest churches, and one in the New Town: besides the Canon-gate, and St Cuthberts, or West Kirk parishes; and those of South and North Leith; the inhabitants of which are included in Sir John Sinclair's late enumeration of the people of Edinburgh. See § 24.

(21.) EDINBURGH, PLACES OF ENTERTAINMENT IN. The CONCERT HALL, called also *St Cecilia's Hall*, stands in Niddery-street; and was built in 1762, after the model of the great opera theatre in Parma. The plan was drawn by Sir Robert Mylne, architect of Blackfriars bridge. The musical room is of an oval form, the ceiling being a concave elliptical dome, lighted from the top by a lantern. The seats are ranged in the form of an amphitheatre; and are capable of containing 500 persons, besides leaving a large area in the middle of the room. The orchestra is at the upper end, and is terminated by an elegant organ. The MUSICAL SOCIETY was first instituted in 1728. Before that time, several gentlemen had formed a weekly club at a tavern kept by one Inch, a great lover of music, and a good finger of 40 shillings. Here the common entertainment consisted in playing, on the harpsichord and violin, the concertos and sonatas of Handel, just then published. The meeting, however, soon becoming precarious, they instituted a society of 70 members, for the purpose of holding a weekly concert. The affairs of the society were regulated by a governor, deputy governor, treasurer, and five directors, who are annually chosen by the members. The meetings have been continued ever since that time on much the same footing as at first, and the number of members is now increased to 300. The weekly concerts are on Friday; the tickets being given gratis by the directors, and attention paid in the first place to strangers. Oratorios are occasionally performed throughout the year; and the principal performers have no benefit concerts. The band are excellent in several departments; and several of the members are also good performers, and take their part.

in the orchestra. There are always many applications on the occasion of a vacancy by the death of any of the members or otherwise; and such is generally the number of candidates, that it is no easy matter to get in. The THEATRE stands opposite to the Register Office, in the middle of Shakespeare Square. The building is plain on the outside but is ornamented on the top of the front with a statue of Shakespeare, and emblematical figures of Tragedy and Comedy. It is elegantly fitted up within, and is generally open 3 days in the week, and when full will draw about 150l. a-night; so that the manager generally finds himself well rewarded, when he procures good actors. Entertainments of the dramatic kind came very early into fashion in this country. They were at first only representations of religious subjects, and peculiarly designed to advance the interests of religion; the clergy being the composers, and Sunday the principal time of exhibition. In the 16th century, the number of play-houses was so great, that it was complained of as a nuisance, not only in Edinburgh, but throughout the kingdom. They soon degenerated from their original institution; and the plays, instead of being calculated to inspire devotion, became filled with all manner of buffoonery and indecency.—After the Reformation, the Presbyterian clergy complained of these indecencies; and anathematized every kind of theatrical representation whatever. King James VI. compelled them to pass from their censures against the stage; but in the time of Charles I. these censures were renewed and redoubled. Amusements of this kind however, were again introduced at Edinburgh about the year 1684, when the duke of York kept his court there. His residence at Edinburgh, brought down one half of the London company, and plays were acted in Edinburgh for some little time. The misfortunes attending the duke of York, however, and the establishment of the Presbyterian religion, soon put a stop to the progress of the stage, and no theatrical exhibition was heard of in Edinburgh till after the year 1715. The first adventurer was Signora Violante, an Italian, remarkable for feats of strength, tumbling, &c. In this way she first exhibited in a house at the foot of Carrubber's Close, which has since been employed by different sectaries for religious purposes. Meeting with success, she invited a company of comedians from London: and these being also well received, Edinburgh continued for some years to be entertained with the performances of a strolling company, who visited it annually. Becoming at last, however, obnoxious to the clergy, they were in 1727 prohibited by the magistrates from acting within their jurisdiction. But this interdict was suspended by the Court of Session, and the players continued to perform as usual. Still, however, theatrical entertainments were but rare. The town was visited by itinerant companies only once in two or three years. They performed in the Tailor's Hall in the Cowgate; which, when the house was full, would have drawn (at the rate of 2s. 6d. for pit and boxes, and 1s. 6d. for the gallery) 40l. or 45l. a-night. About this time an act of parliament was passed, prohibiting the exhibition of plays, except in a house licensed by the

king. Of this the presbytery of Edinburgh immediately aid hold; and at their own expence brought an action on the statute against the players. The cause was by the Court of Session decided against the players; who thereupon applied to parliament for a bill to enable his majesty to licence a theatre in Edinburgh. Against this bill petitions were presented in 1739 to the house of commons, by the magistrates and town-council, the principal and professors of the university, and the dean of guild and his council; in consequence of which, the affair was dropped. All this opposition, however, contributed in reality to the success of the players; for the spirit of party being excited, a way of evading the act was easily found out, and the house was frequented more than usual, inasmuch that the Tailor's Hall was found insufficient to contain the number of spectators. The players now fell out among themselves, and a new play house was erected in the Canongate in 1746. The consequence was, that the old one in Tailor's Hall became entirely deserted, and the managers of the new theatre soon found themselves greatly involved. At last, a riot ensuing through dissensions among the performers, the play house was totally demolished. When the extension of the royalty over the spot where the New Town is built was obtained, a clause was likewise added to the bill, enabling his majesty to license a theatre in Edinburgh. This was obtained, and thus the opposition of the clergy was for ever silenced. But the high price paid by the managers to the patentee, being no less than 500 guineas annually, prevented them from decorating the house as they would otherwise have done, or even from always retaining good actors in their service; by which means the success of the Edinburgh theatre has not been so great as might have been expected. Not far from this building, an amphitheatre, called the *Circus*, was opened in 1790, on the road to Leith, for equestrian exhibitions, pantomime entertainments, dancing, and tumbling. It is 60 feet in diameter; and in the forenoon ladies and gentlemen are taught to ride. The house will hold about 1500 people. On the S. side of George's street, W. of the *Physician's Hall*, (an elegant building erected for the meetings of the faculty, opposite to St Andrew's church, with a portico similar to it,) stand the *ASSEMBLY ROOMS*, which though rather heavy looking on the outside, are nevertheless extremely elegant and commodious within. The largest is 100 feet long and 40 broad, being exceeded in its dimensions by none in the island, the large one at Bath excepted. Weekly assemblies are held here for dancing and card-playing, under the direction of a master of ceremonies; admission tickets 5s. each. See § 36.

(22.) **EDINBURGH, POLICE OF.** No city in the world affords greater security to the inhabitants in their persons and properties than Edinburgh. Robberies are very rare, and a street murder hardly known in the memory of man; so that a person may walk the streets at any hour of the night in perfect security. This is in a great measure owing to the *Town-guard*. This institution originated from the consermentation into which the citizens were thrown after the battle of Flodden.

At that time, the town-council commanded the inhabitants to assemble in defence of the city, and every fourth man to be on duty each night. This introduced a kind of personal duty for the defence of the town, called *watching and warding*; by which the trading part of the inhabitants were obliged in person to watch alternately, to prevent or suppress occasional disturbances. This, however, becoming in time very inconvenient, the town-council, in 1648, appointed a body of 60 men to be raised; the captain of which was to have a monthly pay of 12l. 2s. 3d. two lieutenants of 2l. each, two sergeants of 1l. 5s. and the private men 15s. each. No regular fund was established for defraying this expence; the consequence of which was, that the old method of watching and warding was resumed: but the people on whom this service devolved were now become so relaxed in their discipline, that the magistrates were threatened with having the king's troops quartered in the city, if they did not appoint a sufficient guard. On this 40 men were raised in 1679, and in 1682 the number was increased to 108. After the revolution, the town-council complained of the guard as a grievance, and requested parliament that it might be removed. Their request was immediately granted, and the old method of watching and warding was renewed. This, however, was now so intolerable, that the very next year they applied to parliament for leave to raise 126 men for the defence of the city, and to tax the citizens for their payment. This being granted, the corps was raised which still continues under the name of the *Town-guard*. At present the establishment consists of three officers and about 90 men, who mount guard by turns. The officers have a lieutenant's pay; the sergeants, corporals, drummers, and common soldiers, the same with those of the army. Their arms are the same with those of the king's forces: but when called upon to quell mobs, they use Lochaber axes, a part of the ancient Scottish armour now in use only among themselves. The militia or trained bands of the city consisted of 16 companies of 100 men each. They were in use to turn out every king's birthday; but only the officers now remain, who are chosen annually. They consist of 16 captains and as many lieutenants; the provost being the colonel. The town-guard are paid chiefly by a tax on the trading people; these being the only persons formerly subject to watching and warding. This tax, however, amounts only to 1250l. and as the expence of the guard amounts to 1400l. the magistrates defray the additional charge out of the city's funds.

(23.) **EDINBURGH, POLITICAL CONSTITUTION OF.** With regard to the political constitution of Edinburgh, the town-council have the direction of all public affairs. The *ordinary COUNCIL* consists of 25 persons; the *extraordinary*, of 8; making in all 33. The whole is composed of merchants and tradesmen, whose respective power and interests are so interwoven, that a sort of balance is preserved between the two bodies; although it must be owned, that the merchant who are in council, by monopolising all the offices of superior power and dignity, as well as by their peculiar privilege of *shortening* the trades lects hav

have in reality almost the whole power of the city in their own possession. The members of the town-council are partly elected by the members of the 14 incorporations, partly by their predecessors in office. These incorporations are, those of the furgones, (also erected into a *royal college*;) goldsmiths, skinnners, furriers, hammermen, wrights, shoemakers, tailors, baxters, feshers, cordiners, (or shoemakers) weavers, wankers, and bonnet-makers, or dyers. The election is made in the following manner: First, a list of six members is made out by each incorporation, called the *long list*, and presented to the town council. These lists are then laid before the ordinary council of 23, who shorten the *lists*, by expunging one half of the names from each, and returning the remainder of each list, hence called the *short list*, to the respective incorporations, out of which the deacons for the ensuing year *must* be chosen. The new deacons are then presented to the ordinary council, who choose six of them to be members of their body, and the six deacons of the former year then go out. The council of 23 next proceed to the election of three merchant and two trades counsellors. The members of council, who now amount to 30 in number, then make out *lists*, from which the lord provost, dean of guild, treasurer, and bailies must be chosen. The candidates for each of these offices are three in number; but these candidates do not offer themselves, nor are they elected by the merchant company, of which they are generally members, but are proposed by the leading members of council, and the persons recommended by these, are in most cases unanimously chosen. The election is made by the 30 members of council already mentioned, joined to the 8 extraordinary council deacons, after which, the 5 old counsellors have no further privilege of voting. The lord provost of Edinburgh, who is styled *right honourable*, is high sheriff, coroner, and admiral, within the city and liberties, and the town, harbour, and road of Leith. He has also a jurisdiction in matters of life and death. He is preses of the convention of royal boroughs, colonel of the trained bands, commander of the city guard and of the Edinburgh militia; has the precedency of all the great officers of state and of the nobility, walking on the right hand of the king or of his majesty's commissioner; and has a sword and mace carried before him. Under him are four magistrates called *bailies*, whose office is much the same with that of the aldermen in London, excepting that they continue in office only one year. There is also a dean of guild, who has the charge of the public buildings, and without whose warrant no house nor building can be erected within the city. He has a council to consult with, a nominal treasurer, who formerly had the keeping of the town's money, which is now given to the chamberlain. These 7 magistrates are elected annually; who with the 7 of the former year, three merchants and two trades counsellors, and 14 deacons, making in all 33, form the council of the city, and have the sole management and disposal of the city revenues; by which means they have the disposal of places to the amount of £20,000 annually. Formerly the provost was also an officer in the Scots parlia-

ment. The magistrates are sheriffs depute and justices of the peace; and the town council are patrons of all the churches of Edinburgh, patrons of the university, and electors of the city's representative in parliament. They have besides a very ample jurisdiction both civil and criminal. They are superiors of the Canongate, Portsburgh, and Leith; and appoint over these certain of their own number, who are called *baron bailies*; but the person who presides over Leith has the title of *admiral*, because he has there a jurisdiction over maritime affairs. The baron bailies appoint one or two of the inhabitants of their respective districts to be their substitutes. These are called *resident bailies*, and hold courts in absence of the baron bailies, for petty offences, and discussing civil causes.

(24.) EDINBURGH, POPULATION OF. From a paper in the possession of the session clerk of Edinburgh, quoted by Sir J. Sinclair, in his *Stat. Acc.* (VI. 559.) it appears that there were 3333 families in that city, in 1678. "The old town at that time consisted of 6 parishes only. On the supposition, that there were 6 individuals in each family, the total number would amount to 19,998; which gives but a poor idea of the importance of Edinburgh at that period. If we reckon the CANONGATE to have contained 1500 inhabitants, the parish of St Cuthberts 7000, and those of S. and N. Leith 6000 souls, the total number of individuals in Edinburgh and its neighbourhood was 35,500, in 1678." From a paper communicated by the rev. Dr Blair to Sir John, containing an enumeration of families and examinable persons in the parishes of the city, in 1722, the total number of families was 5979, and of persons 20,336. Adding the usual proportion of one 4th of the examinable persons for children, the number of inhabitants would amount to 25,420: and allowing 15,000 for the suburbs, the total would be 40,420 souls. Dr Maitland, in his *History of Edinburgh*, computing from the register of burials, makes the total number within the 9 parishes 48,000, in 1753. And that this was very near the truth, appears from the enumeration actually made at the request of the rev. Dr Webster, in 1755, when the total number was found to be 57,195. But as in this number, the inhabitants of S. and N. Leith were included, amounting to 9405, the total number of souls in the city and its environs, turns out exactly 47,790, which is within 110 of Dr Maitland's computation, and shows it to have been founded on just principles. The population of Edinburgh had increased very much within 20 years following, for the computation made by the late Mr Hugo Arnot, in 1775, was considerably greater. The number of families in Edinburgh, Leith, &c. are stated by him at 13,806; which multiplied by 6, makes the number of individuals 82,836; to which he adds 1400 for the castle, hospitals, &c. and makes the total amount to 84,236. But it is objected, in the *Stat. Acc.* (VI. 562.) that "6 to a family is too high a calculation, even for Edinburgh, large as the families there are. Reckoning at the rate of 5 to each family, which, it appears from the enumeration in 1791, is sufficiently high, and adding 1400 for the castle, &c. the number of souls in the city and suburbs, including Leith, amounted,

In 1776, to 70,430." The last enumeration of the people of Edinburgh was set on foot in 1791, at the desire of Sir J. Sinclair; and it was actually made by the ministers and elders in 6 parishes of the city, and by those of St Cuthbert's, and S. and N. Leith. The numbers in 6 of the 10 parishes being ascertained, it was thought, sufficient data were thereby afforded for estimating the numbers of families and individuals, in the other 4: The following is an abridged view of the result of this enumeration and calculation:

	Families	Males.	Fem.	Total.
Old Town,	5191	9756	12736	22512
New Town,	1243	2905	4301	7206
Castle,		624	223	847
Canongate,	7552	2700	3500	6200
St Cuthberts,	7133	15571	17376	32947
S. & N. Leith,	3535	6553	7288	13841
Hospitals, pri- sons. &c. }				1333
	18654	38109	45444	84886

But after all, the above enumeration is supposed to be about 3000 under the truth; for in some of the parishes lodgers were not included, and in all of them the real numbers could not be obtained, owing to the absurd apprehensions entertained by many people, that the enumeration was intended for the purpose of laying on some new tax in proportion to the numbers in each family.

(25.) EDINBURGH, PRISONS OF. The TOLBOOTH was erected in 1561, not for the purposes merely of a prison, but likewise for the accommodation of the parliament and other courts; but it has since become so very unfit for any of these purposes, that it is now intended to pull it down and rebuild it, on the area at the back of the parliament house, where the houses that occupied that ground are already taken down for that purpose. It is very inconvenient in its present situation on account of its incumbering the street. The provost is captain of the tolbooth, and has a goaler under him. The latter has a monopoly of all the provisions for the prisoners; a circumstance which must certainly be considered as a grievous oppression, those who are least able to purchase them being thus obliged to do so at the highest price. There is a chaplain who has a salary of L.30 a year, and officiates regularly every Sunday. The Canongate tolbooth is situated near the church, and is a strong well-aired building. A Bridewell, which had been long wanted in Edinburgh, was begun in 1791, and finished in 1794, upon the S. side of the Calton hill. See BRIDEWELL, N° 4.

(26.) EDINBURGH, PUBLIC DISPENSARY OF. This useful institution was founded by Dr Duncan in 1776, for the poor whose diseases are of such a nature, as to render their admission into the infirmary either unnecessary or improper. Here the patients receive advice gratis 4 days in the week; a register is kept of the diseases of each, and of the effects produced by the medicines employed. All patients, not improper for dispensary treatment, are admitted on the recommendation of the elder or church warden of the parish where they reside. The physicians officiate and

give lectures gratis; so that the apothecary's salary and the medicines, are the principal expenses. The whole expense is defrayed by public contributions, and from a small annual fee paid by the students who attend the lectures. It is under the direction of a president, two vice-presidents, and 20 directors, elected annually from among the contributors. One guinea entitles a contributor to recommend patients and be a governor for two years, and five guineas gives the same privilege for life. In 1791, 15,450 patients had been relieved,

(27.) EDINBURGH, PUBLIC OFFICES OF. There is a Hall in the Writers Court belonging to the clerks to his majesty's signet, where there is also an office for the business of the signet. The office of keeper of the signet is very lucrative, and he is allowed a deputy and clerks under him. Before any one enters into this society, he must attend the college for two years, and serve 5 years as an apprentice to one of the society. There is a good library belonging to this hall, which is rapidly increasing, as every one who enters must pay L.10 towards it. He pays also L.100 of apprenticeship fee, and L.100 when he enters. The EXCHANGE is a large and elegant building, with a court of about 90 feet square in the middle. On the N. side are piazzas where the people can walk under cover, the other three sides being laid out in shops; but the merchants have never made use of it to meet in, still standing in the street as formerly. The back part of the building is used for the general Custom-House of Scotland, where the commissioners meet to transact business. They have above 20 offices for the different departments, to which the access is by a hanging stair 60 feet in height. In looking over the window before he ascends this stair, a stranger is surprised to find himself already 40 feet from the ground, which is owing to the declivity on which the exchange is built. For the custom house rooms the city receives a rent of L.1 per day. The Trustees Office for the improvement of fisheries and manufactures in Scotland is in the SW. corner of the exchange; the fund under their management being part of the equivalent money given to Scotland at the Union. This is distributed in premiums amongst those who appear to have made any considerable improvement in the arts. The General Post Office is situated upon the southern extremity of the North Bridge; a neat plain building, with a proper number of apartments for the business, and a house for the secretary. On the east side of St Andrew's Square, stands the GENERAL EXCISE OFFICE, built by the late Sir Laurence Dundas for his own residence, but sold by his son for the above purpose. It is a very handsome building, with a pediment in front ornamented with the king's arms, and supported by four Corinthian pilasters; and in conjunction with the two corner houses, has a fine effect. The MINT is kept up according to the articles of the union, with all the offices belonging to it, though no money is ever struck here. It stands in the Cowgate, a little W. of the English chapel; but is in a ruinous state, though still inhabited by several of the different officers, who have all free houses. The bell-man's office, however, is not a *fine cure*, for he regularly

ring the bell. This place, as well as Holyrood House, is an asylum for debtors.

(28.) EDINBURGH, REGISTER OFFICE OF. This work was first suggested by the late Earl of Morton, lord register of Scotland, with a view to prevent the danger which attended the usual method of keeping the public records. In former times, indeed, these suffered from a variety of accidents. Edward I. carried off or destroyed most of our ancient records, on purpose to prevent any marks of the former independency of the nation from remaining to posterity. Afterwards Cromwell spoiled this nation of its records, most of which were sent to the tower of London. At the time of the Restoration, many of them were sent down again by sea; but one of the vessels was shipwrecked, and the records brought by the other have ever since been left in the greatest confusion.—The Earl of Morton, taking this into consideration, obtained from his majesty a grant of 12,000*l.* out of the forfeited estates, for building a register office, or house for keeping the records, and disposing them in proper order. The foundation was laid, on the 27th June 1774, by lord Frederic Campbell lord register, Mr Montgomery of Edinburgh lord advocate, and Mr Miller of Barnton lord justice-clerk; three of the trustees appointed for executing the work. The ceremony was performed under a discharge of artillery, in presence of the lords of the courts of session and exchequer, and in the sight of a multitude of spectators. A brass plate was put into the foundation stone with the following inscription: CONSTAT HÆC TABULIS PUBLICIS POSITUM EST, ANNO MDCCLXXIV, MUNIFICENTIA OPTIMI ET PRINCIPIS PRINCIPIS GEORGIÏ TERTII. In a glass vase hermetically sealed, which is also placed in the foundation stone, are deposited specimens of the different coins of his present majesty. The front of the building directly faces the bridge, extending from E. to W. 200 feet, and is 40 feet back from the line of Prince's-street. In the middle of the front is a small projection of three windows in breadth. Here is a pediment, having in its centre the arms of Great Britain, and the whole is supported by 4 Corinthian pilasters. At each end the tower projecting beyond the rest of the building, having a Venetian window in front, and a pediment on the top. The front is ornamented from end to end with a beautiful Corinthian entablature. In the centre of the building is a dome of classical work covered with lead. The inside of the dome is 50 feet diameter and 80 high, lighted up by a copper window 15 feet in diameter. The whole is a hanging gallery of stone, with an iron balustrade, which affords convenient places in the walls for keeping the records. The whole number of apartments is 97; all of which are vaulted beneath and warmed with fire-bricks. This building, which is the most beautiful of Mr Adams's designs, has been executed in a most excellent manner, in about 16 years, at the expense of near 40,000*l.* and is one of the principal ornaments of the city. A serjeant's guard is placed near the castle, for the further protection of the records. It is intended to place a statue of his present Majesty in the front of the building, with the lion and unicorn above the centi-

nels boxes. The lord register has the direction of the whole, and the principal clerks of Session are his deputies. These have a great number of clerks under them for carrying on the business of the Court of Session. The lord register is a minister of state in this country. He formerly collected the votes of the parliament of Scotland, and still collects those of the peers at the election of 16 to represent them in parliament.

(29.) EDINBURGH, RELIGIOUS ESTABLISHMENTS IN. See SCOTLAND, and SOCIETY.

(30.) EDINBURGH, REVENUE OF. The revenue of the city, arising partly from duties of different kinds, and partly from landed property, is estimated at about 10,000*l.* per annum.

(31.) EDINBURGH, ROYAL INFIRMARY OF. This excellent institution was first thought of by the college of physicians in 1725. A fishing company happening to be dissolved at that time, the partners contributed some of their stock towards the establishment of the infirmary. A subscription was also set on foot, and application made to the General Assembly to recommend the same throughout their jurisdiction. This was readily complied with, and the assembly passed an act for that purpose; but very little regard was paid to it by the clergy. Notwithstanding this, however, 2000*l.* being procured, a small house was opened for the reception of the sick poor in August 1729. In 1736, the contributors towards the infirmary were erected into a body corporate by royal statute; and after this the contributions increased very considerably; by which means the managers were enabled to enlarge their scheme from time to time; and at last to undertake the present magnificent structure, the foundation of which was laid in 1738. During 25 years, when this institution was in its infancy, lord Hopetoun bestowed upon it an annuity of 400*l.* In 1750, Dr Archibald Ker of Jamaica bequeathed to it 200*l.* a year. In 1754, the lords of the treasury made a donation to it of 800*l.* which had been appointed for the support of invalids. In return for this, the managers constantly keep 60 beds in readiness for the reception of sick soldiers. This year also sick servants began to be admitted into the infirmary, and a ward was fitted up for their reception. This institution, however, was more indebted to Provost Drummond, than to any other person. (See DRUMMOND, N° 1.) So sensible were the managers of their obligations to him, that, in their hall, they erected a bust of him with this inscription, "George Drummond, to whom this country is indebted for all the benefit which it derives from the Royal Infirmary."—In 1748, the stock of the infirmary amounted to 5000*l.*; in 1755, to 7076*l.* besides the estate left by Dr Ker; in 1764, to 23,426*l.*; and in 1790, to 36,000*l.* The infirmary is attended by two physicians chosen by the managers, who visit their patients daily in presence of the students. All the members of the college of surgeons are also obliged to attend in rotation according to seniority. If any surgeon declines attendance, he is not allowed to appoint a depute; but the patients are committed to the care of one of 4 assistant surgeons, chosen annually by the managers.—From 1762 to 1769, there were admitted 6261 patients; which number ad-

were

ded to 109 who were in the hospital at the commencement of 1762, made in all, 6370. Of these, 4395 were cured; 358 died; the rest were either relieved, dismissed incurable, or for irregularities, or by their own desire, or remained in the hospital.—From 1770 to 1775, the patients annually admitted into the infirmary were, at an average, 1567; of whom 63 died. In 1776, there were admitted 1668, of whom 57 died; and in 1777, the number admitted was 1593, and of deaths 51. In 1786, there were admitted 1812 patients; Of these 1354 were cured; 166 relieved; 84 died; the rest were either relieved, dismissed incurable, for irregularities, or by their own desire. The building consists of a body and two wings, each 3 stories high, with an attic story and garrets, and a very elegant front. The body is 210 feet long, and 36 broad in the middle, but at the ends only 24 feet broad. There is a bust of king George II. in a Roman dress, above the great door. The wings are 70 feet long, and 24 broad. In the centre is a large stair-case, so wide that sedan chairs may be carried up. In the different wards, 228 patients may be accommodated, each in a different bed. There are cold and hot baths for the patients, and also for the citizens; but to these last the patients are never admitted. There are also apartments for the officers and servants belonging to the house; with rooms for the managers; a consulting room for the physicians and surgeons, a waiting room for the students, and a theatre for performing chyrurgical operations, that will hold upwards of 200 spectators. There is also a military ward, supported by the interest of the 8000l. already mentioned; and in consequence of which a small guard is always kept at the infirmary. The wards for sick servants are supported by collections at the church doors. There are two physicians belonging to the house, who are elected by the managers, and have a small salary; besides a surgeon and apothecary, who reside in the house. Students who attend the infirmary pay 3l. 3s. annually, which brings in a revenue of about 1000l. In 1791, 323 attended it. Two wards are appropriated for those patients whose cases are most interesting; and the physicians give clinical lectures upon them. Above 2000 patients are now admitted annually.

(32.) EDINBURGH, SCHOOLS IN. The earliest institution of a GRAMMAR SCHOOL in Edinburgh seems to have been about 1519. The whole expence bestowed upon the first building of this kind amounted only to about 40l. sterling. Another building, which had been erected for the accommodation of the scholars in 1538, continued, notwithstanding the great increase of their number, to be used for that purpose till 1777; when the foundation of the present HIGH SCHOOL was laid on the 24th of June, by Sir William Forbes, grand master of the Free Masons. The total length of this building is 120 feet from S. to N. the breadth in the middle 36, at each end 38 feet. The great hall where the boys meet for prayers, is 68 feet by 30. At each end of the hall is a room of 32 feet by 20, for libraries. The building is two stories high, the one 18, the other 17, feet in height. The expence of the whole is reckoned at 4000l. There are a rector and 4 masters, who

teach between 400 and 500 scholars annual. The salaries are trifling, and the fees depend upon the reputation they have obtained for teaching; and as this has been for some years very considerable, the rector's place is supposed to be worth not less than 400l. *per annum*; a master's about half that sum. There is a janitor, whose place is supposed to be worth about 70l. a-year. His business is to take care of the boys on the playground; and there is a woman who lives on the spot as under janitor, whose place may be worth about 25l. annually. There is a library, but not large, as each of the boys pays only 1s. annually for its support. There are 4 established English schools in Edinburgh; the masters of which receive a small salary, upon express condition that they shall take above 5s. per Qr. from any of their scholars. There are likewise many other private schools in Edinburgh for all languages; and, in general, every kind of education is to be had in great perfection, and on very easy terms, in this city.

(33.) EDINBURGH, THEATRE OF. See § 1.

(34.) EDINBURGH, TRADE AND MANUFACTURES OF. There are not many merchants in the strict sense of the word, in Edinburgh, most of them residing at the port of Leith. The support of the city depends chiefly on the consumption of the necessaries and superfluities of life. There are five different sorts of people on whom the city keeps, publicans, and different trades depend. 1. The gentlemen of the law, who are a very respectable body in the city. 2. The number of young people of both sexes who come to town for their education, many of whose parents come along with them. 3. The country gentlemen of the army and navy, and people who have made their fortunes abroad, &c. who come to attend the public diversions, or to spend time in such a manner as is most agreeable. 4. The vast concourse of travellers from all parts. 5. The country gentlemen, whose money, drawn for rents, is mostly circulated among the bankers or other agents. There are excellent manufactures of linen and cambrics in Edinburgh: there are also manufactures of paper in the neighbourhood, and printing is carried on very extensively. Within these few years too, the manufacture of silver plated goods, and particularly of the ornaments for coaches, now so generally used, have been introduced and carried on to a considerable extent, by a company, who are members of the incorporation of goldsmiths. But for some time the capital branch about Edinburgh has been banking: which has gone on with such rapidity, that the city has been increased exceedingly in its extent. It is not uncommon to see a house built in a few months, and even inhabited before the work is quite finished. Mr Creech reckons it “a moderate calculation to say, that three millions sterling have been expended on building and public improvements in and about Edinburgh since the environs of which cannot be surpassed in the sublime, the picturesque and the beautiful.” *J. Sinclair's Stat. Acc. Vol. VI. § 83.*

(35.) EDINBURGH, VICISSITUDES IN ARTS, SCIENCES, LITERATURE, MODES OF LIVING, &c. Mr Creech, in his letters to Sir J. Sinclair, *Acc. VI. § 81.*, already often quoted, justly

less, that it may "be not only entertaining but useful to remark, from time to time, the vicissitudes in civilized society, and the progress of its manners; and by comparing the present with the past, to examine, whether as individuals, or as a people, we were improving or declining.—A plan of this kind, frequently repeated, might lead to cultivation and improvement in some things, and to correction or prohibition in others; while it would afford a valuable fund of facts for the annalist, the philosopher and the historian." Mr Good then proceeds to state a comparison of the changes that had occurred between 1763 and 1783, in the external appearance, extent, &c. of Edinburgh (p. 13, 16, 34, 38.) as well as in "the mode of dress, trade, and manners of the people;" from which we shall give a few extracts: as we agree with him, that "so remarkable a change is not equalled in so short a period, in any city in Europe, nor in the same city for two centuries, taking all the alterations together."—"In 1763, people of quality and fashion lived in houses, which, in 1783, were inhabited by tradesmen, or people in humble or ordinary life. The lord justice clerk Finwald's house was possessed by a French teacher; lord president Craigie's by a rousing wife, or saleswoman of old furniture; and lord Drummore's was left by a chairman for want of accommodation. In 1786, the valued rents of houses in Edinburgh were more than double what they were in 1763; and in 1791 more than triple. In 1763, the cost of the post office of Edinburgh was L. 11,941 per annum: In 1783, it was upwards of L. 40,000 and is since much increased. In 1763, two stage-coaches went to Leith every hour from 11 A. M. till 3 P. M. and consumed a full hour on the road. There were no other stage-coaches in Scotland, except one which set out once a-month for London, and it was from 12 to 16 days upon the journey. In 1783, there were 5 or 6 stage-coaches to Leith every half hour, which ran it in 15 minutes.—There now stage-coaches, flies, and diligences to every considerable town in Scotland, and to many of them 2, 3, 4, and 5. To London, there were 60 stage-coaches monthly, or 15 weekly, and they reached it in 4 days. In 1786, two of these (which set out daily,) reached London in 40 hours. A person may now set out on Monday afternoon from Edinburgh to London; may be a whole day in London, and be again in Edinburgh on Saturday at 6 in the morning! Forty years ago people made their wills before setting out on a London journey. In 1763 hackney coaches were few in number, and perhaps the worst of the kind in Britain: In 1783, the number was more than tripled, and they were the finest carriages, and had the best horses for the purpose, of any in Europe. In 1790, many superb hackney chariots were added. There are no other of the kind in Britain. One hackney coach only cost 100 guineas, and the 2 horses 80. In 1786, triple the number of merchants, physicians, surgeons, &c. kept their own carriages, and even did in any former period, and the number is since increased. In 1783, several presbytery ministers and professors in the university kept their own carriages: a circumstance, which does honour to their literary abilities, and is unequal-

led in any former period of the history of the church or university. In 1763, LITERARY PROPERTY was hardly known in Scotland: David Hume and Dr Robertson had indeed sold some of their works: the one a part of the *History of Britain* for L. 200: the other, the *History of Scotland* for L. 600. In 1783, the value of literary property was carried higher by the Scots than ever was known among any people. D. HUME received L. 5000 for the remainder of his *History of Britain*, and Dr Robertson, for his 2d work, received L. 4,500. In sermon-writing the Scots have also excelled; and although, in 1763, they were reckoned deficient in this species of composition, yet, in 1783, a minister of Edinburgh wrote the most admired sermons that ever were published, and obtained the highest price that ever was given for any work of the kind. N. B. The merit of these sermons obtained for Dr Blair a pension of L. 200 per annum. Previous to 1763, the Scots had made no very distinguished figure in literature, particularly in history and Belles Lettres. Lord Kames had indeed, in 1763, published his *Elements of Criticism*. Hume and Robertson had made their first essays in history, as mentioned above. In 1783, the Scots had distinguished themselves remarkably in many departments of literature; and within the short period of 20 years, Hume, Robertson, Kames, Orme, Dalrymple, (Sir David and Sir John,) Henry, Tytlers, (father and son,) Watson, Reid, Beattie, Oswald, Ferguson, Smith, Monboddo, Gregories, (father and son,) Cullen, Homes, (poet and physician,) Monros, (father and son,) Black, Duncan, Hunter, Stewarts, (father and son,) Stuart, (Dr Gilbert,) Blair, Mackenzie, Campbell, Gerard, Miller, Macpherson, Brydone, Moore, Smellie, Mickle, Gillies, Adam, Sinclair, and many other eminent writers have appeared." To these respectable names may be added that of the late Dr Brown, whose *Elementa Medicinæ* was published in 1777, and whose merits are now known over the greatest part of Europe and America. "In 1764, the Speculative Society was instituted by 6 students at the University, for improvement in composition and public speaking. It can now boast of eminent members in the senate, in the pulpit, in professors chairs, at the bar, in medicine, &c. In 1783, the Society of Antiquaries, and the Royal Society of Edinburgh, were constituted by royal charter. From 1780 to 1786, Edinburgh produced two periodical papers, *the Mirror*, and *the Lounger*, which met with much approbation. No other periodical paper of note has appeared in Britain, since *the World* and *the Connoisseur*, in 1753, and 1754. In 1786, a Chamber of Commerce was constituted by royal charter, and has led the public attention to many useful objects. In 1790, a society for the improvement of wool was instituted by Sir J. Sinclair, and has had the effect of rousing attention to this valuable article. In 1763, the stock of the society for propagating Christian knowledge amounted to L. 30,000. In 1791 it amounted to L. 100,000, and is most faithfully applied to its object: 160,000 children have been educated, and there were 10,000 in their schools in 1791. In 1763, the number of boys at the grammar school was not more than 200: In 1783 it was 500. It is believed

to be the most numerous school in Britain. In 1788, a large and expensive building was erected by subscription, called the Circus." (See CIRCUS, No 4.) "The money received for the first four months of this exhibition was L. 3000. In 1792, the circus was converted into a play-house, and Edinburgh has now two regular theatres. In 1763, there were two newspapers, printed in very small folio, and the advertisements in each were from 10 to 20. In 1783, the half of an Edinburgh newspaper, which was bought in 1740 for L. 36, was sold for L. 1300. In 1790, there were four established newspapers: and in 1792, six. The size of the paper is as large as any of the kind in Britain; and the advertisements in some of them are from 60 to 100, sometimes more, notwithstanding a heavy and increased duty both on the paper and advertisements. In 1780, a regiment (the 80th) of 1000 men, was raised by the voluntary contributions of the citizens, in two months. In 1763, there were 396 four-wheeled carriages entered to pay duty, and 462 two-wheeled carriages. In 1790, there were 1427 four-wheeled carriages, entered to pay duty, and 462 two-wheeled: and of wains and carts 6450.—In 1763, few coaches or chaises were made in Edinburgh. The nobility and gentry, in general, brought their carriages from London; and Paris was reckoned the place, where the most elegant carriages were constructed. In 1783, coaches and chaises were constructed as elegantly in Edinburgh as any where in Europe; and, it may be added, stronger and cheaper. Many were yearly exported to Petersburg, and the cities on the Baltic; and there was, in 1783, an order from Paris to a coach-maker in Edinburgh for 1000 crane-necked carriages to be executed in 3 years. This trade has since greatly increased. In 1763; there was no such profession known as a haberdasher. In 1783, the profession of a haberdasher was nearly the most common in town, and they have since multiplied greatly. In 1763, there was no such profession known as a perfumer: barbers and wig-makers were numerous; and were in the order of decent burghesses: Hair-dressers were few, and hardly permitted to dress hair on Sundays; and many of them voluntarily declined it. In 1783, perfumers had splendid shops in every principal street: Some of them advertised the keeping of bears, to kill occasionally, for greasing ladies and gentlemen's hair, as superior to any other animal fat. Hair-dressers were tripled in number, and their busiest day was Sunday. There was a professor who advertised *A Hair-dressing Academy*, and gave lectures on that noble and useful art. In 1763, there were no iron founderies near Edinburgh; the Carron Company's work was the only one of the kind in Scotland, and it had been established but a few years. In 1792, there were many extensive iron founderies, and several in the neighbourhood of Edinburgh. Cast iron, which was formerly imported, is now exported in great quantities. In 1792, there are several button manufactories lately established in the neighbourhood of Edinburgh, which were unknown in any former

period. In 1792, manufactories of shawls and cassimirs have been lately established and brought to wonderful perfection. It is estimated that the consumption of coals in Edinburgh, amounts to 500 tons per day. In 1763, the starch manufacture was little known or practised; and only about 37,000 lb. were manufactured. In 1790, there were several starch manufactories. The quantity entered was about 750,000 lb. weight. The increase 713,000 lb. N. B. A very great proportion of this is used for hair powder. One starch manufacturer paid L. 700 of duty every 6 weeks. In 1763, the revenue arising from the distillery, in Scotland, amounted to L. 4739; 88110. In 1783, it amounted to L. 192,000: consequently 600,000 gallons of spirits at least must have been distilled. Since July 1786, the duty has been levied by licence on the contents of the stills. The quantity that might reasonably be expected from the number of stills entered should be thus: In the lowlands 1,000,000; in the highlands 696,000 total 1,696,000 gallons of spirits. In 1763, the gross revenue of the excise was about L. 130,000; in 1790, it was about L. 500,000. At the Union there were no stamp duties in Scotland. In 1790, the revenue on stamps was above L. 80,000. In 1763, there was one glass-house at Leith, for the manufacture of green bottles: In 1783, there were three glass-houses; in 1790, there were five, and as fine crystal and window glass is made at Leith, as any where in Europe. In 1763, the quantity of glass manufactured in Scotland amounted to 1,769,712 lb. In 1790, it amounted to 9,059,904 lb. Increase 7,290,192. In 1763, there were three paper mills in the neighbourhood of Edinburgh: In 1790, there were twelve; and vast quantity of paper was sent to London, from whence it used formerly to be brought. Some of these paper mills are upon a more extensive scale than any in Britain. In 1763, the quantity of paper manufactured was 6,400 reams: in 1790, it was upwards of 100,000 reams: Increase 93,600 reams. N. B. Notwithstanding the astonishing increase of stamp duty, and of paper manufacture, yet Scotland must bring all her stamped paper from London. The very carriage of the stamped paper to Edinburgh, it is believed, costs government L. 700, per annum, when it could be stamped in Edinburgh for a trifle, and the manufacture of paper thereby greatly encouraged. The present mode appears to be neither just nor politic. The articles of the Union, Scotland is entitled to have a board of stamps. In 1763, there were 6 printing houses in Edinburgh: in 1790, there were 12. In 1763, the printed cottons manufactured amounted to 150,000 yards: in 1790, to 4,500,000 yards: increase 4,350,000 yards. In 1763, the Royal Bank stock sold at L. 160 per cent. In 1791, Royal Bank new stock sold at L. 240 per cent. The capital is above L. 600,000. The original shares of the Bank of Scotland, of L. 83: 6 sold in 1763 at L. 119; and in 1791 at L. 119. N. B. This bank lately obtained an act for doubling its capital, or to raise it from L. 300,000 to L. 600,000.

† We suspect this number to be an error of the press, but we give it as it stands in Sir J. Sinclair's *Stat. Acc.* VI. p. 592. It is indeed incredible, that the four-wheeled carriages should have increased nearly four-fold, while not so much as one was added to the number of the two-wheeled.

L. 100,000. The British Linen Company's stock; in 1763, and for many years later sold at L. 40 per cent below par: In 1792, L. 336 of its stock sold for L. 545; i. e. L. 162 : 4 : 1½ per cent. In 1769, The Douglas and Co. Bank was instituted, and the stock subscribed amounted to L. 150,000. In a few years this bank failed, and this failure occasioned land to be sold, to the value of L. 750,000. Although this loss was hurtful to many individuals, the country was highly benefited; for the money having been bestowed principally on the improvement of the soil, the gain was lasting and general. In 1763, Heriot's Hospital gave fees of their ground at the rate of from 3 to 4 bolls of barley per acre per annum: In 1790, Heriot's Hospital leased their land at from 8 to 10 bolls per acre yearly. The stock of the Royal Infirmary, which, in 1750, was L. 5000, in 1790 was L. 36,000. In 1763, 100 students attended it: In 1791, 323 students attended. In 1776, a public Dispensary was built, and in 1791, no less than 15,450 patients had been relieved. In 1763, the shore dues at Leith, (a small tax paid to the city of Edinburgh on landing goods at the quays,) amounted to L. 680: In 1783, they were upwards of L. 4000. In 1763, and for some years after, there was one ship, that made an annual voyage to Petersburg; and never brought tallow, if any other cargo offered. Three tons of tallow were imported, in 1763, from Newcastle. In 1783, the ships from Leith and the Frith of Forth to the Baltic amounted to some hundreds. They make two voyages in the year and sometimes three. In 1786, above 2500 tons of tallow were imported directly from the Baltic. The importation of Baltic goods into Leith is surpassed by only one, or at most two ports in Britain. In 1763, every ship from London or Petersburg to Leith, brought part of her cargo in soap: In 1783, every ship, that went from Leith to London, carried part of her cargo in soap. In 1763, the quantity of soap manufactured was half a million of pounds: In 1790, it was 6 millions. In 1763, the quantity of candles entered amounted to 1,400,000 lb. In 1780, it was 2,200,000: In 1791, it was 3,000,000 lb. The increase of this article shows the progress of manufactures, for candles are either imported or exported. In 1763, the increase of tonnage in the shipping of Leith was 42,234 tons; and has since so greatly increased, that magnificent plans have been formed for enlarging the harbour. In 1791, the registered tonnage at Leith was 130,000 tons. In 1763, there was no such thing known or used as an umbrella; but an eminent surgeon used one about 1780; and in 1783 umbrellas were much used, and continue to be so; many umbrella warehouses are opened, and a considerable trade carried on in this article. The fashion is spread through Scotland. In 1763, the wages to maid servants were generally from L. 3 to L. 4 a year. They dressed decently in blue or red cloaks, or in pleats, suitable to their stations. In 1783, the wages were nearly the same, but their dresses and appearance greatly altered; the maid servants being almost as fine as their mistresses did in 1763. In 1763, few families had men servants: The wages were from L. 6 to L. 10 per annum. In 1783, and 1791, almost every genteel family had

a man servant; and the wages were from L. 10 to L. 20 a year. In 1763, a stranger coming to Edinburgh was obliged to put up at a dirty uncomfortable inn, or to remove to private lodgings. There was no such place as an *Hotel*; the word, indeed, was not known, or was only intelligible to persons acquainted with French. In 1783, a stranger might have been accommodated, not only comfortably, but most elegantly, at many public hotels; and the person, who, in 1763, was obliged to put up with accommodation little better than that of a waggoner or carrier, may now be lodged like a prince, and command every luxury of life. His guinea, it must be acknowledged, will not go quite so far as it did in 1763. The quantity of wheat made into flour at the Water of Leith mills, was, in 1760, 33,887 bolls; in 1791, 48,257. This gives the proportional increase at these mills only: for besides these, Bell's Mills, Silver Mills, Canon Mills, Leith Mills, &c. grind flour for the city, all of which have increased their quantities in proportion. There must now be above 150,000 bolls of wheat annually consumed in this metropolis. The quantity of butcher meat killed in Edinburgh was, in 1775, 8,354 oxen, 6,792 calves, 39,370 sheep, 47,366 lambs: In 1790, 11,792 oxen; 4500 calves, 37,390 sheep, and 49,200 lambs. In 1778, there were 8400 barrels of oysters exported. This trade increasing so much as to threaten the destruction of the oyster beds, the magistrates prohibited the exportation. There are immense quantities of strawberries sold in the Edinburgh market. It is estimated that 100,000 Scots, or 400,000 English pints are sold in favourable seasons, besides the quantities consumed in the pleasure gardens. It is estimated that L. 1000 a year is paid in Edinburgh for butter milk. In 1763, Edinburgh was chiefly supplied with vegetables from Musselburgh and the neighbourhood, which were called through the streets by women with *creeks* or baskets on their backs: Any sudden increase of people would have raised all the markets. A small camp at Musselburgh a few years before had this effect. In 1783, the markets of Edinburgh were as amply supplied with vegetables and every necessary of life as any in Europe." See a striking instance of this in § 15.

(36.) EDINBURGH, VICISSITUDES IN THE MANNERS AND MORALS OF THE PEOPLE OF. Mr Creech, in his 2d Letter to Sir J. Sinclair, which we shall now use the freedom to quote, restricts his comparison between the periods above-mentioned, chiefly to the changes that took place in the manners and morals of the inhabitants of Edinburgh: which he introduces with the poet's complaint,

*Ætas parentum, pejor avis tulit
Nos nequiores,—&c.*

HOR.

"In 1763, (says he,) people of fashion dined at 2 o'clock, or a little after it; business was attended to in the afternoon. It was a common practice to lock the shops at one o'clock, and to open them after dinner at two. In 1783, people of fashion and of the middle rank dined at four or five o'clock: No business was done in the afternoon, dinner of itself having become a very serious business. In 1763, wine was seldom seen, or, in a

small quantity at the tables of the middle rank of people. In 1791, every tradesman in decent circumstances presents wine after dinner; and many in plenty and variety. In 1763, it was the fashion for gentlemen to attend the drawing-rooms of the ladies in the afternoons, to drink tea, and to mix in the society and conversation of the women. In 1783, the drawing-rooms were totally deserted; invitations to tea in the afternoon were totally given up; and the only opportunity gentlemen had of being in ladies company, was when they happened to *meet* together at dinner or supper; and even then, an impatience was sometimes shewn, till the ladies retired. Cards after a long dinner, and also after a late supper were frequent. In 1763, it was fashionable to go to church, and people were interested about religion. Sunday was strictly observed by all ranks, as a day of devotion; and it was disgraceful to be seen on the streets during the time of public worship. Families attended church with their children and servants; and family worship was frequent. The collections at the church doors, for the poor, amounted yearly to L. 1500, and upwards. In 1783, attendance on church was greatly neglected, and particularly by the men; Sunday was by many made a day of relaxation; and young people were allowed to stroll about at all hours. Families thought it ungenteel to take their domestics to church with them: The streets were far from being void of people, in the time of public worship; and in the evenings were frequently loose and riotous; particularly owing to apprentice boys and young lads. Family worship was almost disused. The collections at the church doors for the poor had fallen to L. 1000. In 1791, the collections had risen to L. 1200.—“In 1763, masters took charge of their apprentices, and kept them under their eye in their own houses. In 1783, few masters would receive apprentices to stay in their houses; and yet from them an important part of succeeding society is to be formed. If they attended their hours of business, masters took no farther charge. The rest of their time might be passed, (as too frequently happened,) in vice and debauchery; hence they became idle, insolent, and dishonest. In 1791, the practice had become still more prevalent. Reformation of manners must begin in families to be general or effectual. In 1792, the wages to journeymen in every profession were greatly raised since 1763, and disturbances frequently happened for a still farther increase. Yet many of them riot all Sunday, are idle all Monday, and can afford to do all this on 3 days labour. In 1763, the clergy visited, catechized, and instructed the families within their respective parishes, in the principles of morality, Christianity, and the relative duties of life. In 1783, visiting and catechizing were disused, (except by a very few,) and since continue to be so.—If people do not choose to go to church, they may remain as ignorant as Hottentots, and the ten commandments be as little known as obsolete acts of parliament. Religion is the only tie that can restrain in any degree, the licentiousness either of the rich or of the lower ranks. In 1763, the breach of the 7th commandment was punished by fine and church censure. Any instance of conjugal inide-

lity in a woman would have banished her irretrievably from society, and her company would have been rejected even by men, who paid any regard to their character. In 1783, although the law punishing adultery with death was unrepealed, yet church censure was disused, and separations and divorces were become frequent, and have since increased. Women, who had been rendered infamous by public divorce, had been, by some people of fashion, again received into society, notwithstanding the endeavours of our worthy Queen to check such a violation of morality, decency, the laws of the country, and the rights of the virtuous. This, however, has not been recently attempted. In 1763, the fines collected by the kirk-treasurer, for bastard children, amounted to L. 154; and upon an average of 10 succeeding years, they were L. 190. In 1783, the fines for bastard children amounted to L. 600, and have since greatly increased. In 1748, the first Correction house for disorderly females was built. In 1791, manners had been for some years so loose, and crimes so frequent, that the foundation of a large new BRIDEWELL was laid. From June 1763, to June 1764, the expense of the Correction house amounted to L. 27: 16: 1½. In 1791, and for years previous to it, the expense had risen to L. 300, ten times what it had been in the former period; and there is not room for containing half of those that ought to be confined to hard labour. In 1763, there were 5 or 6 brothels, a very few of the lowest and most ignorant females culled about the streets at night. A party might have gone from the castle to Holyrood house, at any hour of the night, without being accosted by a single *street-walker*. Street robbery and pocket-picking were unknown. In 1783, the number of brothels had increased 20 fold, and the women of the town more than 100 fold.—Street robbers, pick-pockets, and thieves, had much increased. In 1763, house breaking and robbery were extremely rare. Many people thought unnecessary to lock their doors at night. In 1783, 84, 85, 86, and 87, house-breaking, theft, and robbery were astonishingly frequent; and many of these crimes were committed by boys, whose age prevented them from being objects of capital punishment. The culprits were uniformly apprehended in houses of bad fame, in which they were encouraged in their depredations on the public. During the winter 1787, many daring robberies and shop-breakings were committed, by men before unthought of; but the gang were discovered by one of them becoming evidence against the rest, and the others suffered capital punishment. (See *Brodie's Trial*.) In no respect was the sobriety and decorum of the lower ranks, in 1763 more remarkable, than by contrasting them with the riot and licentiousness of 1783, particularly Sundays and holy-days. The king's birth-day the last night of the year were, in 1783, devoted to drunkenness, folly, and riot, which in 1763 were attended with peace and harmony. In 1763, many years preceding, the execution of crime was rare: Three annually were reckoned the average for the whole kingdom of Scotland. 1774, 75, and 76, there was not an execution in Edinburgh. In 1783, there were 6 criminals

the sentence of death in Edinburgh in one week : And upon the Autumn Circuit, no less than 37 capital indictments were issued. During the winter 1791, 92, there was not a robbery, house breaking, shop-breaking, nor a theft publicly known, to the amount of 40 s. within Edinburgh. Not a person accused of a capital crime : and in the jail only 10 for petty offences, and 19 for small debts. In 1789, a society was instituted for promoting religious knowledge among the poor, or the ignorant and indigent among the lower ranks. This was a favourite scheme of the late Lord Kames, but was never carried into execution in his time. A worthy lady left, in 1792, L. 700 to promote the object of this institution. In 1763, there was no such diversion as public cock-fighting in Edinburgh. In 1783, there were many public cock-fighting matches, or *mains*, as they are technically termed : and a regular cock-pit was built for the accommodation of this school of gambling and cruelty, where every distinction of rank and character is levelled. In 1790, the cock-pit continues to be frequented. Before 1790, there never was such a thing known as professed *bragging*. But in the course of that year, a person from England opened a public school for teaching boxing or pugilism, as it is termed ; and he had several public exhibitions at his school, but few pupils. This branch of Education does not correspond with the mild genius of Christianity which we profess ; and it can be looked on only with pity, even when practised among savages and barbarians. In 1792, this folly, which had been borrowed from the south, was totally given up. Mr Creech next delineates the character of a *fine fellow* in 1763, and of a *fine fellow* in 1783 ; but the contrast between them is so striking, and at the same time so just, that it merits a place by itself, as a separate article ; more especially as the latter character is not peculiar to Edinburgh, but to be found in every great town in Britain. See *Fine Fellow*. He then proceeds as follows :—“ In 1790, among the lower orders, swearing had increased greatly : And on trials in the courts of Law, perjury had also increased. In 1791, immoderate drinking, or *pushing the bottle*, as it is called, was rather out of fashion among genteel people. Every one was allowed to do as he pleased in filling or drinking his glass. The means of hospitality, and the frequency of shewing it, had increased ; and excess on such occasions had decreased. In 1763, in the best families in town, the education of daughters was fitted, not only to cultivate and improve their minds, but to accomplish them in the useful and necessary arts of domestic economy. The sewing school and the dairy school, were then essential branches of female education ; nor was a lady of the best family allowed to go to market with her mother. In 1783, the daughters of many tradesmen consumed the mornings at their toilet, or in strolling from shop to shop. Many of them would have blushed to have been seen at a market. The cares of the family were devolved upon a house-keeper ; and the young lady employed those heavy hours, when she was disengaged from public or private amusements, in improving her mind from the perusal of a circulating library ; and all, whe-

ther they had taste for it or not, were taught music at a great expense. In 1791, there is little alteration. Every rank is eager to copy the manners and fashion of their superiors.—Of what importance, then, is correct and exemplary manners in the higher ranks to the good order of society ! In 1763, young ladies (even by themselves) might have walked through the streets of the city in perfect security, at any hour. No person would have interrupted or spoken to them. In 1783, the mistresses of boarding schools found it necessary to advertise, that their young ladies were not permitted to go abroad without proper attendants. In 1791, boys, from bad example at home, and worse abroad, had become forward and insolent. They early frequent taverns, and are soon initiated in folly and vice, without any religious principle to restrain them. It has been an error of 20 years, to precipitate the education of boys, and make them too soon men. In 1763, the weekly Concert of music began at 6 o'clock : In 1783, it began at 7 ; but it was not so much attended as such an elegant entertainment should have been, and which was given at the sole expense of the subscribers. In 1791-2, the fashion changed, and the concert became the most crowded place of amusement.—In 1763, the question, respecting the morality of stage plays, was much agitated. A clergyman” (Mr John Home), “ a few years before, had been brought before the General Assembly, and suspended from his office, for having written a tragedy,” (*Douglas*) “ unquestionably one of the most chaste and interesting in the English language. By those who attended the theatre, even without scruple, Saturday night was thought the most improper in the week for going to the play. Any clergyman, who had been known to have gone to the play-house, would have incurred church censure. In 1783, the morality of stage plays, or their effects on society, were not thought of. The most crowded houses were always on Saturday night. The boxes for the Saturday night’s play were generally taken for the season, so that strangers often on that night could not get a place. The custom of taking a box for the Saturday night through the season was much practised by boarding mistresses ; so that there could be no choice of the play, but the young ladies could only take what was set before them by the manager. Impudent buffoons took liberties with authors, and with the audience, in their acting, that would not have been suffered formerly. The galleries never failed to applaud what they formerly would have hissed, as improper in sentiment or decorum. In 1763, there was only one dancing assembly room ; the profits of which went to the support of the Charity work-house. Minuets were danced by each set, previous to the country dances. Strict regularity with respect to dress and decorum, and great dignity of manners, were observed. In 1786, the old assembly room was used for the accommodation of the City Guard. There were 3 new elegant assembly rooms at Edinburgh, besides one at Leith ; but the Charity work-house was unprovided for, to the extent of its necessities. Minuets were given up and country-dances only used, which had often a nearer resemblance to a game of romps, than to elegant

of the fort in Europe, will be the completest and most commodious; and it will do the utmost honour to the genius of the architect and to the munificence of the public. "So popular was this measure," says Mr Creech, "that in 5 months the subscriptions amounted to 16,869l. and they are now (in 1792) 31,608l. The estimate for completing the whole is about 63,000l. The 6 columns in the front are not to be equalled in Britain. The shaft of each is twenty three feet high, and 3 feet diameter, of one entire stone. The BOTANICAL GARDEN belonging to the university is situated at the distance of about a mile, on the road between Edinburgh and Leith. It consists of about 5 acres of ground; and is furnished with a great variety of plants, many of them brought from the most distant quarters of the globe. The professor is botanist to the king, and receives a salary of 120l. annually for the support of the garden. A monument, to the memory of the celebrated botanist Linnæus, was erected here by the late Dr Hope, who first planned and perfected the garden.

(38.) EDINBURGH, UTMOST EXTENT OF. Mr Creech in his 1st letter to Sir John Sinclair, above quoted, states the present extent of Edinburgh (with its suburbs,) which, "in 1763, was almost entirely confined within the city walls," as follows:—"From the W. end of Fountain Bridge, to the E. end of Abbey Hill is above two English miles. From Broughton, on the N. to Grange Toll-bar on the S. is about two English miles. The circumference, by the report of a gentleman, who walked round it with a view to ascertain this point, is as nearly as he could estimate 7 English miles." *Stat. Acc.* VI. 585.

(39.) EDINBURGH, WATER RESERVOIRS OF. The water, with which both the old and new towns are supplied, is excellent. It is brought for some miles in pipes of lead and cast iron, and lodged in two reservoirs, from whence it is distributed through the city both to public wells and private families. A revenue accrues to the town from the latter, which must undoubtedly increase in proportion as the city extends in magnitude. It was so late as 1672 before the city was supplied with fresh water from the country. Peter Bruschie, a German, was employed to accomplish this useful and necessary work; by bringing water from Comiston, which is 44 feet above the level of the Castle hill, to the city reservoir there; which he executed so much to the satisfaction of the magistrates, that he was rewarded with a gratuity of L.50 St. beyond the sum agreed for. The discharge into that cistern is estimated at nearly 7 hhd. per minute. This reservoir contains 291 tons 3 hhd. and 6 gallons. But from the vast increase of people this quantity being found too small to supply the old and new towns, another reservoir was built in Heriot's gardens a few years ago, and was supplied with fresh water from springs in Pentland hills and Liberton. And to the honour of the late William-Charles Little-Gilmour of Liberton, Esq; it deserves to be recorded, that while some other gentlemen of property demanded extravagant sums for the water on their grounds he very patriotically made a free gift of the springs in Liberton to the town. The pipes of the new cistern are so constructed by Mr Gordon the en-

gineer, that when it is full, it shuts of itself and sends forward the remaining water, without wall to the old cistern in the castle hill.

(II.) EDINBURGH, or } See MID LoTHIAN.
EDINBURGH-SHIRE, }

EDINDON, or EDINTON, a town of Wales memorable for a victory obtained by Alfred the Great, over the Danes.

EDINGLEY, a village of England, in Nottinghamshire, near Southwell.

EDINGTHORP, near N. Walsham, Norfolk.

(1.) EDINGTON, a town in Somersetshire.

(2.) EDINGTON, SW. of Morpeth, Northumb.

EDINTON. See EDINDON.

EDISBURY, in Delamere forest; Cheshire.

EDITH-CHAPEL, E. of Padstow, Cornwall.

* EDITION. *n. f.* [*editio*, Latin.] 1. Publication of any thing, particularly of a book.—The English *edition* is not so properly a translation, as a new composition upon the same ground. *Burns*. 2. Republication; generally with some revision or correcting.—These are of the second *edition*. *Shakspeare*.—The business of our redemption is to rub out the defaced copy, or the creation, to repair God's image upon the soul, and to set forth a new figure in a second and a fairer *edition*. *South*.—I can not go so far as he who published the last *edition* of him. *Dryden's Fob. Pref.*—The Code, composed hastily, was forced to undergo an emendation and to come forth in a second *edition*. *Baker*.

(1.) * EDITOR. *n. f.* [*editor*, Latin.] Publisher; he that revises or prepares any work for publication.—When a different reading gives us a different sense, or a new elegance in an author, the *editor* does very well in taking notice of it. *Addison's Spectator*.—This nonsense got into all the *editions* by a mistake of the stage *editor*. *Pope's Notes on Shakspeare*.

(2.) AN EDITOR is a person of learning, who has the care of an impression of any work, particularly that of an ancient author: thus, Erasmus was a great editor; the Louvain doctors, Scaliger, Petavius, P. Simond, bishop Walton, Mr Hearne, Mr Ruddiman, &c. are likewise famous editors.

EDIWESTON, a village in Nottinghamshire SE. of Okeham, 6 miles from Mansfield.

EDLAND, LAKE, or SLAVE LAKE, a lake in N. America, N. of the lake of Arapescow, near the Arctic Circle.

EDLASTON, a town in Derby, near the Dove.

(1.) EDESTOWN, a parish of Scotland, in the county of Peebles, 10 miles long from E. to W. and 7 broad, where widest. Contains 21,250 acres; of which 1400 are under crop. Though the surface, being hilly, is chiefly devoted to pasture, yet every farm but one, contains as much arable land as employs 3 ploughs. Husbandry is much improved. The chief crops are bear, oats, beans, pease, sown grass, potato and turnips. Nearly 1200 bolls of bear, and many of oats and pease are annually exported. The rent is doubled within these 26 years, yet the tenants are thriving and some of them opulent. The population in 1793, stated by the rev. Mr Patrick Robertson, in his report to Sir J. Sinclair was 710, and had increased 31 since 1755. The number of horses was 193; of sheep 8,400; and of black cattle 620.

(2.) EDESTOW

(1.) **EDLESTOWN**, a village in the above parish, 17 miles S. of Edinburgh, and 4 N. of Peebles, on the post road. It contained 180 inhabitants in 1793.

EDLING. See **ATHELING**.

EDLINGHALL, a village in Staffordshire, NE. of Lichfield.

(1.) **EDLINGTON**, near Tickhill, Yorkshire.

(2.) **EDLINGTON**, near Horncastle, Lincoln.

EDLISBOROUGH, near Ivingo, Buckingham.

EDMISTON, near Modbury, Devonshire.

EDMONDSBIERS, a village in Durham.

EDMONDSBURY, St. See **BURY**, N° 3.

EDMOND'S CAPE, St. } a promontory and
EDMOND'S CHAPEL, St. } village on the NW.
side of Norfolk.

EDMONDSHAM, a village in Dorsetshire.

EDMONDSTON, a town 5 miles from Sarum.

EDMONDTHORP, a village in Leicestershire.

EDMONDTON, 7 miles from London.

EDMUND I, king of England, the son of Edward the elder, succeeded his brother Athelstan, A.D. 941, and exhibited proofs of great courage and abilities during a short reign of about 8 years. He was murdered by Leolf, a robber, A.D. 949. See **ENGLAND**.

EDMUND II, (surnamed **IRONSIDE**), from his strength and valour, succeeded his father Ethelred II. A.D. 1016, in that part of England which was not then possessed by the Danes. He was endowed with great abilities, but was murdered by the traitor, Edric, D. of Mercia, before he had reigned 3 years. See **ENGLAND**.

EDMONDSBURY, St. See **BURY**, N° 3.

(1.) **EDNAM**, or **EDENHAM**, a parish of Scotland, in Roxburghshire, lying on the banks of the Eden and the Tweed, in one of the most delightful situations in Scotland, within a mile and an half of the English border. It is 3 miles in breadth and somewhat more in length. The climate is healthy; the soil is various, consisting of strong clay, light sand and channel; moss and marl. Agriculture is carried on extensively, and the farmers are industrious and opulent. The population in 1793, stated by the rev. David Dickson, in his report to Sir J. Sinclair, was 600, and had increased 213 since 1755. There are a brewery, two mills, and bleachfield in the parish.

(2.) **EDNAM**, or **EDENHAM**, a village in the above parish, seated on the N. bank of the Eden, (whence the name) near Kelso. **THOMSON**, the celebrated author of *The Seasons*, was born at Ednam parish, in 1700.

(3.) **EDNAM HILL**, a small hill in the above parish, on the N. side of the Eden, near the village, N° 1.

EDNOP, a village in Shropshire.

EDOLO, a town of the Cisalpine republic, in the dept. of Benaco, and ci-dievant province of Bresciano.

(1.) **EDOM**, [עֲדָמָה, Heb. i. e. red.] or **ESAU**, the son of Isaac and brother of Jacob. The name, *Edom*, was given him, either because he sold his birth-right to Jacob for a mess of red pottage, or by reason of the colour of his hair and complexion. **IDUMEA** is derived from *Edom*, and is often called in scripture the land of *Edom*. See the next article.

(2.) **EDOM**, or **IDUMEA**, in ancient geography, a district of Arabia Petraea. A great part of the S. of Judaea was also called *Idumaea*, because occupied by the *Idumaeans*, upon the Jewish captivity, quite to Hebron. But the proper *Edom* or *Idumaea* appears not to have been very extensive, from the march of the Israelites, in which they compassed it on the S. eastwards, till they came to the country of the Moabites. Within this compass lies mount *Hor*, where *Aaron* died; marching from which the Israelites fought with king *Arad* the Canaanite, who came down the wilderness, against them. And this is the extent of the *Idumaea Propria*, lying S. of the Dead Sea; but in *Solomon's* time extending to the Red Sea. 1 Kings ix. 26.

EDROM, anciently **ETHERHAM**, a parish of Scotland in Berwickshire, about 10 miles long and 6 broad. The surface is generally flat, the climate healthy, and the soil mostly fertile, though part of it is moorish and barren, or clayey. The population in 1790, stated by the rev. Will. Redpath, in his report to Sir J. Sinclair, was 1336. He does not mention the population in 1755. The number of horses was 280, of sheep 3000, and of black cattle 600. There are a paper mill, a lint mill, and a wheel manufacture in the parish; which employ 66 people. Husbandry is much improved, and the greater part of the ground is inclosed.

EDSAN, a river of Russia, which runs into the Lena, 20 miles SE. of Ziganak.

EDSON, or } a village SE. of Henley, War-

(1.) **EDSTON**, } wickshire.

(2.) **EDSTON**, NE. of Helmsley, Yorkshire.

EDSWOL, a town of Norway, 18 miles SW. of Bergen.

* To **EDUCATE**. *v. a.* [*duco*, Latin.] To breed; to bring up; to instruct youth.—

Their young succession all their cares employ;
They breed, they brood, instruct and educate,
And make provision for the future state. *Dryd.*
—Education is worse, in proportion to the grandeur of the parents: if the whole world were under one monarch, the heir of that monarch would be the worst educated mortal since the creation, *Swift on Modern Education.*

E D U C A T I O N.

INTRODUCTION.

EDUCATION is thus simply defined by Dr Johnson:

* **EDUCATION**. *n. f.* [from *educate*.] Forma-

tion of manners in youth; the manner of breeding youth; nurture.—*Education* and instruction are the means, the one by use, the other by precept, to make our natural faculty of reason both the better and the sooner to judge rightly between

tween truth and error, good and evil. *Hooker*.—All nations have agreed in the necessity of a strict education, which consisted in the observance of moral duties. *Swift*.

A more ample and satisfactory definition has been given by others in these terms:—"Education is that series of means, by which the human understanding is gradually enlightened, and the dispositions of the human heart are formed and called forth, between early infancy and the period when a young person is considered as qualified to take a part in active life."

The word, EDUCATION, among the ancients seems to have had a signification different from that which is affixed to it by the moderns. *Educat obstrictrix*, says Varro, *educat nutrix, instituit pedagogus, docet magister*. According to this distinction, education, institution and instruction are as different, as the midwife, the nurse, the preceptor and the master. But without entering into verbal distinctions of this kind, we shall consider education in the comprehensive sense now generally affixed to it, as expressed in the above definition.

As no subject is of more importance than education, being in a manner, the foundation, when properly considered, of all science, as well as of all virtue, so many eminent authors, both ancient and modern have wrote upon it. *Lycurgus* and many others of the most eminent legislators of antiquity, considered a proper education as so necessary to form good citizens, that they incorporated their systems of education, with the codes of laws they gave to their countrymen. But among all the legislators and authors of antiquity, of whose works any relics have come down to us, none appears to have wrote with more propriety on this subject, than the celebrated *QUINTILIAN*; who taught rhetoric in Rome under Domitian, *Nerva* and *Trajan*.

Among the moderns, the sublime *MILTON*, and the judicious *LOCKE*, have wrote useful treatises on this important subject. Our respectable countryman too, the late Lord *Kames*, wrote an excellent tract, which he modestly entitled *Loose Hints on Education*: The celebrated Mr *SHERIDAN*, too, published a *Plan of Education for the Nobility and Gentry of Great Britain*: And the famous *ROUSSEAU*, whose genius and eccentricities are well known to the public, wrote his *Emilius* expressly on this subject. To these respectable names may be added those of Dr *Turnbull*, Mr *James Barclay*, Father *Gerdil*, Mr *Whitchurch*, the rev. Mr *Williams*, the learned Dr *Priestley*, the abbe *De Condillac*, Dr *Ash*, Dr *Bahrdr*, M. *Verdier*, the rev. Mr *Knox*, M. *Philippon de la Magdelaine*, Mr *Webb*, Mr *Shepherd*, M. *Berquin*, Dr *Parr*, prof. *Chavannes*, the rev. Mr *Parsons*, Mr *Philippe*, Mrs *Catharine Macauley Graham*, and Dr *Rush* of Philadelphia. From these various sources we shall endeavour to extract what appears not to detract from the merits of other authors, to be of most importance, on this subject: But, the *Treatise on Education*, of which a 5th edition was lately published, by the learned and ingenious *GEORGE CHAPMAN*, L. L. D. (formerly of *Dumfries*, now of *Edinburgh*) appears to be in itself so complete and excellent a work, that we might dilate

the more than present our readers with a copy of it were it not that it would be a piece of great injustice to the learned author, to borrow the whole of a work, which merits every compensation, that the public can possibly make, by the most liberal and extensive sale. We shall, however, use the freedom, to give a few brief extracts from it, in his own words, particularly in the first part of our Treatise.

PART I.

GENERAL THEORY OF EDUCATION.

SECT. I. GENERAL REFLECTIONS on the SUBJECT.

"MAN is eminently distinguished among the inhabitants of this globe. He derives this distinction from the structure and aspect of his body, and still more from the powers and affections of his mind.

"The mind indeed seems to have but few ideas at first, and even to be indebted for these to external objects. But the noble and extensive powers, with which it is endued, discover themselves by degrees, and render it highly susceptible of improvement. This improvement is connected with the perfection and happiness of mankind: If the mind be darkened by error, corrupted by vice, we shall be miserable, as well as mean; if it be enlightened by knowledge, formed to virtue, we shall more easily support the natural evils of life, and we shall open to ourselves the truest and the largest sources of happiness.

"Hence it appears, that of all the objects which can attract our attention, there is none so interesting as the mind itself. And hence it is, that those who have the charge of youth ought, in particular manner, to study the nature of the human mind. They should trace it in all its different appearances, and observe it, with a still more curious and attentive eye, in the first and uncorrupted season of life. They should attend to its gradual openings; they should assist it in exertions, and supply it with proper material knowledge. Beginning with the natural objects with which a child is surrounded, they should teach him how to discover their more obvious useful qualities; then they should point out the changes made upon them by human industry, the purposes for which such changes are made. Discoveries of this kind, and explanations as children advance in age, and as the objects present themselves to their notice, will excite their curiosity, and instruct as well as employ their minds. This will be a proper foundation for languages, the arts, the sciences. The acquisition of knowledge should be made, as much as possible, the fruit of their own inquiries, and the unconstrained exertions of their mental powers. Thus they will learn to exercise their understanding in the pursuit of knowledge, rather than trust, upon all occasions, in a lazy and implicit manner, to the opinions of their parents and teachers. Parents and teachers are surely entitled to the highest respect, as well as obedience from children: but they should take the most

sedal measures to secure this respect ; they should take the simplest and most probable methods of cherishing those seeds of knowledge which seem more or less to be lodged in the minds of children, and require only proper culture to rear them. Far from pushing children forward in a precipitate manner, by loading their memories with unexplained words, or by requiring from them tasks above their comprehension, or of little utility in life, they should keep pace with their rising genius, by adapting their instructions to their confined ideas, and respective capacities, by explaining every word till it be fully understood, and by teaching with greater care those things which are afterwards to be most useful to them.

Further, as education is known to have a powerful influence in forming the tempers and characters of men, parents and teachers should endeavour, as soon as children are capable of comprehending the social ties, to cherish, with the strictest vigilance, that benevolence which is the bond of society, to strengthen that sense of right and wrong which makes a distinguished part of the human constitution, and to prevent those false associations of ideas which are destructive of happiness, and which, children unexperienced in life, and deluded by appearances, are apt to form. Above all, they should study to inspire them with feelings of duty and gratitude to the Supreme Being, considered as their parent, benefactor and judge; and to enforce, by a prudent discipline, all those principles which have a tendency to make them happy in themselves, and useful to others.

While they are thus employed in cultivating the mind, the body is by no means to be neglected. Its influence over the mind is as great as its union with it is surprising. The body, when softened by indolence, or by mistaken tenderness, enervates the mind, relaxes its vigour, and renders it, for every great or difficult undertaking ; when pampered and weakened by luxury, or the gratification of irregular appetite, it subjects the mind to various not its own, and excites those passions which are the enemies of happiness and of life ; but when it is nourished by temperance, and sustained by exercise, it enables the mind to exert its native strength, inspires it with cheerfulness, builds up the benevolent affections, sets virtue in the most amiable light, and shews it to be the true happiness of man.

If we consider the simplicity of children, and carefully to preserve them from prejudice, and hold them open to the best impressions, and directed with every step they advance in the road to knowledge and to virtue. This encourages parents and tutors to cultivate the minds of children with the utmost attention ; and renders them accountable, if they suffer the noxious weeds of folly and vice to spring up in a soil so valuable, and so capable of improvement. This attention, as has been already observed, should begin with the earliest period of life. Weak and flexible, and destitute of experience, and unimproved by reflection, children are ready to adopt the sentiments and copy the manners of those with whom they converse, or of those on whom they depend. Their propensity to imitation, together with the

contagion of example, may hurry them into a blind compliance with the vices and follies of others, and thereby expose them to all the inconveniences of error in judgment and in practice. At the same time, this very propensity, if properly directed, will act like a powerful engine in favour of virtue.

From such reflections as these, we may see the dignity of the human mind, the importance of education, the manner in which we ought to conduct it at first, the great objects we ought always to have in view, the necessity of taking care of the body as well as the soul, and the encouragement we have to turn our attention to this subject from the innocence and the docility of children. Hence too parents may learn, that if they neglect the education of their children, the riches which they may accumulate, and the splendid or lucrative employments, which they may procure for them, will but increase their misery. And hence teachers may see the principles which they ought to inculcate, and the nature of the duties incumbent on them, or rather of the high privilege conferred upon them. What occupation is there on earth more useful to mankind, or more delightful in itself, than to improve the mind of man ? And what more probable means of succeeding in so noble an attempt, than to superintend it in the first exertions of its faculties, and preserve it, through the critical season of youth, in that healthful state in which its happiness consists ?

The foregoing observations are sufficiently confirmed by the experience of the ancients as well as the moderns. History, that mirror of human life, exhibits to our view the fortune of mankind ever varying in proportion to their care or negligence in the education of youth. Where this was attended to, and properly conducted, we see, that not only individuals, but even societies, were virtuous and happy ; where this was neglected, or the method of conducting it mistaken, we see likewise, that they plunged themselves into vice ; and felt, at length, its direful and unavoidable effects.

It would be a task no less disagreeable than unnecessary, to give instances of nations that have been corrupted and ruined by the neglect of education. It will be more pleasant to turn our eyes to those wiser nations, whose attention to this great object was rewarded with the prosperity which it tends to produce.

History informs us, that the ancient PERSIANS, sensible of the advantages of early culture, took care to bestow those advantages on a considerable number of their children, whom they brought up by one common plan. How beautiful does that plan appear, as described by XENOPHON ! To it they stood indebted, in a great measure, for those amiable virtues which distinguished the founder of their empire from other conquerors : to it was owing the success of the Persian troops, whose officers were educated in the same school with Cyrus, accustomed betimes to the same temperate and hardy way of life, and trained up in the principles of justice, honour, and magnanimity. Happy people, had they extended

tended their care to those of the lower rank, and confined their ambition within the boundaries of the ancient kingdom of Persia!

"We read too that LYCURGUS was no less sensible of the importance of early discipline. The spirit of his laws was, to extinguish avarice in his countrymen, and to render them hardy and invincible in war. In this great and generous design he succeeded: never were the Lacedemonians so powerful, or so happy, as when they observed the institutions of that celebrated lawgiver. It is true his plan was defective in some particulars, and erroneous in others; and even where not exceptionable in point of morals, it can by no means be proposed as a model for a commercial state, or an extensive empire. With either of these it seems to be altogether inconsistent; and it is mentioned only as an instance of the power of education, when extended to the different ranks of the people; and as a proof, that the attention of mankind may be diverted from those objects which are pursued with so general and so fond an affection, and which owe their charms mostly to prejudice contracted in early life.

"But if the Lacedemonians and the Persians, under all their disadvantages, discovered such taste and judgment in the education of youth, and took such pains to render it effectual; if the former inspired their citizens with a degree of self denial and public spirit unknown to other societies; and if the latter formed a body of men who did honour to their country in the arts both of peace and war; more still may be expected from the inhabitants of GREAT BRITAIN, who enjoy a form of government far superior to theirs, and have much better opportunities of improvement. Enlightened by a sounder philosophy, and blessed with a purer religion, and with liberty extended to the lower as well as the higher ranks of the people, shall we be wanting in a matter of such consequence to our own happiness as well as that of posterity?

"An object so important, and so highly valued by heathens, deserves particular attention from a nation thus distinguished. But the difference between ancient and modern education will shew how negligent we are in that respect. The ancient Persians and Lacedemonians were not the only nations of antiquity that studied to give a proper education to their children. The Egyptians and the Cretans are said to have had excellent laws and very prudent institutions on this head. The Romans, till corrupted by luxury, and debased by despotism, were remarkable for the early care they took to preserve the virtue, and to regulate the manners of their children: and we are told, by the author of the Treatise on the Decline of Eloquence among them, that the child was not abandoned at first to mercenary nurses, nor intrusted afterwards to servants, or others of abject minds, and of sordid manners; but that it was customary to chuse out some elderly female relation, of liberal sentiments, and approved conduct, to whom the family, or perhaps families connected by blood or neighbourhood, committed the care of their children from their infant years. This venerable person strictly regulated their sports and amusements, as well as their more

serious pursuits, and carefully restrained them from saying or doing any thing that was contrary to decency and good manners. Such a method of discipline, he observes, was attended with this as well as other advantages: Young men were conducted, with sound and untainted minds, to the study of the liberal arts, and fired with a noble desire of improvement and distinction. Among the ATHENIANS, to whom we are, in a great measure, indebted for the arts and the sciences, persons of the highest dignity, and of the greatest abilities, disdained not to direct the studies, and to form the manners of youth. Many of the philosophers, who were also their teachers, were more distinguished by their taste and learning than by their experience in business, and the rule they held in the state. They conveyed the knowledge of things, as well as of words, in an easy manner; and despising that haughty and dogmatic air which is so discouraging to a learner, they admitted an unreserved freedom of conversation which we have several instances in the dialogues of Xenophon and Plato. And the athletic exercises, and public games, which were encouraged among all the nations of Greece, were attended with considerable advantages: They rendered the body more hardy and vigorous; they gave the frequent opportunities of corresponding together; they diffused a manly, independent, patriotic spirit. Thus they served as a school for military virtue, and at the same time secured the public liberty.

"Modern education is very different from this. During the earliest period of childhood, that for the first five years, when the mind is disposed to receive the strongest impressions, it is frequently, and most unhappily, perverted. Nor is it all to complete the misfortune, it is often trusted, in the succeeding period of life, to persons who have never had proper opportunities of improvement, are too often strangers to that enlargement of sentiment, and that delicacy of language, which arise from a more cultivated mind and a better acquaintance with mankind. In those of superior education, and easy fortunes, regarding the instruction of youth as a field in which little glory or wealth is to be acquired, chuse to employ their talents where greater power, rich or honour, may be expected.

"Nor will this appear surprising, when we consider the unfavourable circumstances in which the teachers of youth are placed, and the difficulties with which they have to struggle. The former are owing to the inattention of mankind; the latter to the acquired depravity of children. Neglected in their tender years by their parents, who are their natural guardians; corrupted by the servants, to whose care they are committed; misled astray by the example of those with whom they are allowed to converse, it is little wonder they find it a difficult task to separate ideas which they have learned falsely to connect, to set bounds to passions which they have been allowed to indulge, and to shake off habits to which they have been so long accustomed. And a little reflection on what we must have frequently observed in life will serve to convince us more fully of the abuses committed in education, of the defects of the

common practice, of the difficulties which the instructors of youth have to encounter, and of the inconveniences to which they are exposed."

Sect. II. Of the ERRORS and EFFECTS in the USUAL METHODS of EDUCATION.

"The errors which are frequently committed in education by parents, and those to whom they transfer the care of their children, may be reckoned one great source of human misery. A few instances will confirm the truth of this observation.

"In the first period of life, when the child is most susceptible of impressions, he is surrounded with prizes of low education and of weak minds. The consequence is, that he borrows their ideas, he imbibes their prejudices, he adopts their manners. Being generally intrusted to such persons, he is often corrupted by the manner in which he is treated by them. Is he peevish, for instance, and refuses to take his ordinary food? he is told, that unless he take what is offered him, it will be given to another. The tendency of such a practice is obvious. It cannot fail of producing a selfish and malignant turn of mind. Is he discomposed by any accident? it is thought proper to punish the author of his misfortune, guilty or innocent, animate or inanimate; and, which is still worse, he is sometimes encouraged to inflict the imaginary punishment himself, till at length, having wrecked his passion, he recovers his former tranquillity. Hence we see how the heart is hardened, and how hatred, cruelty and revenge, so fatal to mankind, are implanted in the human breast.

"The manifold accidents to which we are continually exposed, the opposite views and different tempers of mankind, and the precarious hold we have of whatever is external, require that the mind should be formed, by an early and prudent culture, to bear, with fortitude and self-command, the various troubles and misfortunes to which we may be subjected. Notwithstanding this, it is an uncommon thing, to see those children whose tempers are warm, and who are susceptible of the finest feelings, frequently neglected in this important point. Instead of teaching them patiently to endure pain and disappointment, and the other evils of life, which cannot be altogether avoided; instead of teaching them to govern their passions, and direct them to proper objects, their parents are often blind enough to allow them to contract an impatience under misfortune, and an impetuosity of spirit when thwarted, both which, gathering strength from indulgence, are often productive of trouble to others, and of misery to themselves. To sources of this kind may be traced many of those outrages which disturb the peace of society, and blast the enjoyment of life.

"Instead of being taught candidly to acknowledge his faults, the child is suffered to make excuses for them; and sometimes, by a direct lie, to disown them. Thus the sacred regard which is due to truth is gradually diminished, and, that sacred being broken down, dissimulation, the bane

of virtue, establishes an early and a powerful empire in the human heart.

"Is the child sluggish or refractory? it is thought, proper to engage him to his duty by a bribe. Thus, instead of disinterestedness, and the love of virtue, he contracts a sordid and mercenary turn, and a strong attachment to money, which he considers as the great object that interests the passions of men, and the spring by which they ought to be moved: and the high encomiums on it which he so frequently hears, the passion for it which he observes in the generality of mankind, and the respect which he sees paid to the rich, independent of their virtues, naturally tend to pervert his taste, and teach him to associate the ideas of merit, and of happiness, with the possession of riches.

"If he gets money from his relations or friends, which they design through a fond but mistaken affection, as an expression of their regard or esteem, he is often permitted, or rather encouraged, to throw it away in purchasing those things which will sow the seeds of luxury and profligation in his tender mind. Hence that unhappy keenness for toys, fruits, sweet meats, &c. which we observe in youth, and which, like other infirmities, is nourished by indiscreet and early indulgence; and hence may be derived that desire of superfluities, and those numerous artificial wants, with which a vitiated appetite, or depraved taste, punishes those who depart from the simplicity of nature.

"Thus we are so far from cultivating a principle of virtue in children during this early period, that we cannot fail, by so unwary a conduct, to ingraft vice in their tender breasts. Hence it is that teachers find it so difficult a task, to root out of their unfortunate pupils those false notions which they have already formed, and to train them up, by virtuous habits, to be good men and useful members of society.

"When the child arrives at 6 or 7 years, and begins now to multiply his amusements, and to extend his acquaintance, seldom is sufficient care taken to regulate his diversions, and make them subservient to the improvement of his mind, or the health of his body. Is attention given in proportion to the flexibility of his temper, or his want of experience, to shew him the difference of character among the living as well as the dead; to guard him against the infectious example of any idle or naughty children, with whom he may have occasion to converse; and to encourage an intimacy between him and those who are diligent, modest, and virtuous? Is he taught with proper care, to strive with his equals in the noble contest of making himself wiser and better than they? Is he taught, at the same time, to suppress the first risings of envy, that enemy of human happiness, and to resist the emotions of pride and vanity, those silly and selfish passions which are so apt to steal into the unguarded breasts of youth, and especially those of the brightest genius? Is he taught, likewise, to love his companions, to sympathize with

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them

† "In the lowest ranks of mankind, this circumstance cannot be avoided; but it is also very frequently the misfortune of children born in the middling stations, where it might be avoided."

them under sickness or unfortunate accidents : to look upon all mankind as his brethren, children of the same common parent ; and to consider those to whom he is superior in understanding, or in any of the advantages of fortune, as intitled, upon all occasions, to his advice and assistance ?

“ The Author of nature, who confers his gifts with a liberal hand, and adapts them with a parental foresight to the various exigencies of mankind, often bestows a particular genius upon particular persons, and seems by this wise provision, to have marked out the walk of life for which they were designed. Notwithstanding this innate and useful bias, it seldom happens that either the parents or the instructors of a child apply their sagacity to discover the bent of his genius, or direct his studies with a view to render it most valuable to himself, and most beneficial to society.

“ But if his genius be not particular, it would be proper as he advances through youth, and before he chuses his employment, to give him a just view of the advantages and disadvantages, which attend the different occupations of mankind, and to point out to him how far any trade or profession, which he may have in view, is useful to society, and how far it may be suited to his capacity, his temper, and his constitution. Though such considerations as these ought to have great weight in determining his choice, yet seldom is such attention given to direct him, as the importance of that critical step, and the need he has of advice, seem to require. Unexperienced in life, and ignorant of what qualities are necessary in different occupations, he is by no means a proper judge for himself : uninstructed by his parents or teachers, he is too ready to determine himself by the taste of his companions, or by the little incidents which may happen to strike his fancy in the place where he receives his education.

“ In this critical period he is seldom instructed, with proper care, in the use of his time and his money ; or taught to spend the former as becomes a rational creature, to divest the latter of the false value stamped upon it by the prejudices of mankind, and to view it in the true light in which it ought to be viewed. To acquire those accomplishments and those habits, when young, which will render us useful in life ; to provide for ourselves when of age, and for our families, that they may not be burdens to society ; to give our children a virtuous education ; to relieve the indigent, to encourage modest merit, to promote honest industry and public spirit among men, and in general, to do good to our fellow creatures, are the great purposes to which our time and our money should be applied.

“ We may observe too, that he is not sufficiently taught to look upon industry in his future employment and upon a faithful performance of the duties of his station, as a debt which he owes to the public ; nor is he instructed to value men by the decency and propriety with which they acquire themselves in society, rather than by the rank which they hold. He ought, among other things, to be taught that, if an employment be useful, however humble, it is never to be treated with ridicule or contempt ; and can never be so mean, as to preclude the person who industriously and honestly

follows it, from the protection and good opinion of mankind.

“ We see also that he is not directed, with proper care, to the surest means of attaining happiness. Happiness, that great object which mankind universally pursue, may be considered as consisting both in freedom from pain, and in enjoyment of pleasure. To avoid pain, it is necessary he should not allow his lower appetites, or selfish passions, to usurp that place in his breast which is due to the nobler and more refined. To procure a succession of the most elevated pleasures, he should not rest satisfied with the regularity of an inoffensive conduct, while unprofitable to others : He should endeavour, by improving and exerting his faculties, to render his usefulness as extensive as possible. And that he may be more useful in life, and consequently more happy, his parents and teachers should take all possible pains to form his mind in his early years, and to enforce their admonitions by a proper discipline. Thus he will acquire good habits when young ; and virtue will, by degrees, become easy and delightful to him. But how shall parents train up their children, or teachers instruct their pupils, and inspire them with a just taste of books and of manners, unless they have acquired such a taste themselves ? How can we expect to be happy ourselves, or to perform our duty to those who are under our care, if we suffer ourselves to be hurried away by the violence of our passions ? It is true the passions are necessary to quicken our course in the great voyage of human life : and if we could learn to keep them within due bounds, how smoothly and how pleasantly should we sail over the ocean of life, which, in our present circumstances, we find sometimes so tempestuous and so fatal ! But the passions receive their directions, in a great measure, from the ideas which we have learned to associate, and the opinions we have formed. It is natural for beings who live in society, and are constituted like us, to try to excel one another : but is it not as natural for them to try to excel in knowledge and virtue, as in wealth or power ? Is it not prejudice, and a shameful perversion of their faculties, if they do not ? To be sensible of an injury is natural ; but is it not all natural, since we are indued with moral feelings, and with reason as well as with passions, to fix proper bounds to our resentments, rather than allow them to hurry us away blindly into violence and bloodshed ? Are reason and conscience placed within us to check the impetuosity of our passion and shall we despise their heavenly admonitions ?

“ If then we would not be disappointed of our true happiness, which consists in the perfection of our nature ; if we would not be wanting the duty which we owe to those who are under our care, let us study our internal constitution with the greatest attention ; let us try, by the due exercise of our reason, to strip outward objects of that false and adventitious lustre which our early prejudices may have thrown upon them and let us weigh every enjoyment in the scale of reason and of wisdom ; let us be careful to acquire a taste in our pleasures ; let us give the pleasure of sense, and of appetite, no more than their subordinate and their proper place ; let us strive

make ourselves acquainted with those which arise from the culture of our intellectual powers, such as the love of knowledge and the fine arts; and, rising still higher in our taste, let us direct our ambition to those of a moral kind, those of piety, fidelity, humanity, public spirit, generosity, and the exalted joys of a self-approving mind.

"Were we thus enlightened in the pursuit of happiness, were we thus formed to virtue, how desirable a spot would this earth be, and how transporting the society of mankind! But if this be carrying our ideas too high, and if the rank which we hold in the creation does not permit us, as short-sighted creatures, to think of perfection here, we find ourselves, at least, bound by every tie of duty and of interest, and by the very law of our nature, not only to aspire at the highest attainable degrees of virtue ourselves, but to lend our hand to others, and conduct them up the arduous path. But whom shall a tutor conduct but his own pupils, whom he has engaged to instruct? or whom shall a parent conduct rather than his own children, who are the most natural objects of his care, and the most proper subjects of his culture? If we be thus employed, we shall co-operate with our almighty and beneficent parent; and inspired with benevolence and the love of virtue ourselves, we shall be disposed to look upon others, when deviating from their duty, not so much with hatred and horror, as with concern and compassion: we shall consider them as labouring under a distemper, as less fortunate than we have been in the means of education, as less indebted to the public for the opportunities given them of improving their understanding, and as forming their taste in their early years. For though society justly punishes the breach of its laws, in order to bring us back to our duty, or to deter others from the like practice; yet it appears, that, in many instances, mistaken views are the occasion of vice, and that the folly of the transgressor is often greater than his guilt. And it will not be denied, that if proper attention were given to preserve the mind uncorrupted, and to cultivate it betimes, many of those calamities which arise from irregular and ill-directed passions might be prevented.

"I shall not expatiate on the advantages which would arise from a cultivated mind, and a rational pursuit of happiness. These are so obvious that they will not be disputed. Nor is it necessary to dwell on the above detail of the mistakes committed in educating children; or of the defects of the common practice; since every one, from his own reflections, must make but too many additions. All any little reflection on this important subject will be sufficient to discover the necessity of reforming the common methods of education, and the reason there is for improving them. How to remove such errors, and supply such defects, must be left in a great measure to the ingenuity and care of parents and teachers. And as there are some circumstances which greatly obstruct their united

labours, I shall presume, in the course of this work, to point out a scheme by which these obstructions may be removed. But how favourable soever the public institution may be rendered for the education of youth; yet, if we consider the diversity of tempers, the struggle of passions, and the variety of cases that will occur, we shall find, that, in different circumstances, different methods will be necessary. The greatest care should be taken to preserve those children from infection whose minds are as yet uncorrupted by the world; and where medicine may be necessary for the mind, it should be adapted, with a skilful hand, to the temper of the child, and the mental diseases to which he is most liable. On this subject treatises have appeared, and systems have been written; and men of considerable reputation in the learned world, have not disdained to employ their genius in laying down rules for the education of youth. After all, it is still to be regretted, that some of those systems are too confined, and others too little suited to practice, and to the circumstances of mankind, connected in society, and depending upon one another. But as many ingenious observations have been made, and many useful directions given, by Mr Locke, Mr Rousseau, and other writers on education, I shall throw together such of their precepts and remarks as appear to be of the most extensive use; and mingling some reflections of my own, I shall publish them, thus blended together, as the second part of this treatise, after having prefixed some rules laid down by approved physicians for the management of infants*. Much will still depend upon the parents, and much upon the qualifications and character of the persons to whom they transfer their authority. It will be proper, first, to inquire, whether children should be educated in public or in private†; how a school should be constituted and governed; and to consider the nature and degrees of education necessary for the lower ranks; that is, the far greater part of mankind."

SECT. III. Of the ADVANTAGES and DISADVANTAGES of a PUBLIC and PRIVATE EDUCATION.

"One unfavourable circumstance in a private‡ education is the dependence of tutors on the parents of their pupils. On these they depend, not only for their present subsistence, but frequently also for their future establishment; and as parents are not always the best judges of education, nor always considerate enough to invest the tutor with proper authority, he is sometimes constrained to adopt that method of instruction which the parents lay down for their children, how improper soever that method may be, and to submit to the caprice of his pupils, whom he ought to direct.

"Another disadvantage is, the risk a boy thus educated runs of being perverted in his temper, as well as retarded in his studies, by undue indulgence from his parents, and by servile flattery from domestics. This is often complained of by private

* Dr CHAPMAN'S Treatise on EDUCATION, Part II.

† This inquiry concerns only those children whose parents can afford them a domestic education. The greater number, being born in circumstances which admit not of the expense of a private tutor, must be educated by the public mode.

‡ Private education is meant a domestic one.

vate tutors: and indeed it is natural to suppose, that, by this means, a boy, though otherwise capable of the best impressions, will be in danger of becoming untractable, and impatient of contradiction, arbitrary in his principles, as well as unsocial and tyrannical in his temper. Hence he will be disposed to treat those of inferior rank with insolence, as well as contempt; and having hitherto met with little opposition to his desires, and not knowing what it is to live on an equality with others of the like age with himself, he will expect the same compliance from the world which he met with at home. And as he will often find himself disappointed of the homage which he so long considered as his due, he must become peevish and uneasy, and feel, on many occasions, the disagreeable effects of the injustice that was done him in his early years.

"Add to this, that a private education is not of so great efficacy in exciting a spirit of emulation. There is implanted in the human mind an ardent desire to excel. This desire, operating with greater force in society, proves a strong motive with most boys, and keeps some awake who would otherwise languish in sloth, if they were not frequently roused by the application of this powerful spur. Powerful it is; for by it the giddy may be fixed, the passionate may be restrained, and the sluggish may be roused. The consciousness of excelling is so pleasant, and of being excelled so painful, that the hardest task will be attempted, and the severest restraint endured, in hopes of acquiring pre-eminence in the class. This emulation, this virtuous rivalry for knowledge, ought never to be checked, and will not be easily rooted out, while social institutions remain. It is therefore, the business of a public education to watch over a passion which is to have such influence over us, and so to govern it, that it may never degenerate into envy. Let us, both parents and teachers, avail ourselves of this propensity to vie with one another, and let us lead youth to a rivalry in virtue as well as in knowledge. Let us set them an example ourselves. For our encouragement, though we should miss the first prize in this glorious contest, yet our labour will not be lost. We shall find ourselves amply rewarded in the acquisitions we make; and the greater these are, the more useful shall we be to those who are under our care, the more pleased shall we be with ourselves, the greater joy shall we feel, that others keep pace with us, or even get before us, in this illustrious race; for such is the nature of true wisdom, that like her sister charity, she envieth not.

"But to return: By means of a public education boys will much sooner enlarge their ideas, and cultivate their understandings; for while they are engaged in reading the same lessons together, their mutual inspection will enliven their studies, their rivalry will sharpen their genius, and their united endeavours will render their tasks more easy, as well as more delightful.

"Besides, if a boy be accustomed to associate with others of the same age, and under the same regulations with himself, he will more effectually get the better of that rawness, and that awkward bathfulness, which are so remarkable in those who

have been late in entering into society; and will more readily acquire an activity, and openness of temper, which are very necessary to a young man who would make a figure in business, and put himself in a capacity of serving the public or his friends.

"Friendship, by the tender sympathies which it produces, is known to heighten our joys, and to soften our cares. By the attachments which forms, it is often the means of advancing a man's fortune in the world. When begun in youth, it has been found to grow up gradually, and to last as long as life itself. Public education furnishes the best means of forming this amiable tie: it accustoms us to live in society; it calls forth the social affections; it gives kindred souls a better opportunity of meeting while they are most susceptible of friendship, and of all the generous passions.

"Further, boys who are educated at a public school, being placed in circumstances similar to what they will experience in their progress through life, will learn to examine the characters of their companions, and derive advantage from the experience of others, as well as their own.

"It has been alledged by some, that a public education, by accustoming children to an implicit obedience, tends to depress their spirits, to inspire them with slavish notions, and thus to prepare them for absolute subjection to their political governors. But if this ever happens, it ought to be charged to the account of a public education; but rather to the unskilfulness of the teacher, and his abuse of the authority with which is invested. Where public education is properly conducted, the obedience of the learner will be voluntary, pleasant, and healthful. It will be salutary; for it will be founded on a sense of the reasonableness of his teacher's injunctions: It will be pleasant; for a boy is pleased with the thought of being treated in a rational way: It will be healthful; for the briskness of his spirits, flowing from the happiness of his condition, will strengthen his constitution, enliven his genius, and sweeten his temper. By such an education too, he will be trained up to be a good citizen: he will feel the necessity of government, in order to cure his ignorance, and to check the disorders of mankind; but he will be shocked at any cruel or arbitrary exertions of power. To this may be added, being accustomed to deliver orations at the public examinations of the school, and on other occasions, in the English language, and on subjects adapted to his capacity and years, he will, by means of that early preparation, be better qualified for a more public appearance, if he aspires to the honour of serving his country at the bar, the pulpit, or in the senate.

"From the foregoing view of a public education, it will appear to be best calculated for inspiring that vigour of mind, as well as instilling those principles of action, which are most suited to the spirit of the British constitution, and which holds out rewards to cultivated genius and distinguished industry and bids them rise from humbler to the higher stations of life.

"These are no doubt valuable advantages which may justly be expected from a public education. But, on the other hand, it will be said, that

these advantages are out-weighed by the disadvantages which attend it, since it appears that, in fact, children at public schools, are often neglected in their studies, and corrupted in their morals. But when this happens, it is not to be imputed to the nature of such institutions: it is to be imputed to the unsuitableness of the persons who have the charge of such schools, to the multiplicity of things which they are obliged to teach at one time, and to the smallness of the salary which they receive from the public. That the first of these evils exists more frequently than could be wished, is no wonder, since it is the natural consequence of the other two. Few men, properly qualified, will choose to follow an employment where so various and so constant labour is required, unless the advantages attending it were much more considerable than they generally are. And so unfortunate is the condition of many of our schools, that, supposing the teacher sufficiently qualified, yet his attention must be distracted, by the number of objects to which it is called, and dissipated to such a degree, as to render his exertions unpleasing to himself, and unprofitable to his pupils, while the scantiness of his salary must oblige him to engage in some other business, or to receive more scholars than he can properly educate. In the former case, the school will become but his second care; in the latter, he will find it impossible to give proper attention to the studies or morals of his pupils, and can only hope to preserve even the appearance of teaching them, by crowding them into few classes or forms, and jumbling the diligent and the idle, the sprightly and the slow promiscuously together. The absurdity of such an arrangement is as evident as the consequences of it are pernicious: for if the teacher gives the quicker boys lessons sufficient to employ their time, the slower, who read along with them, being pushed through tasks to which they are unequal, and finding themselves, on the one hand, held behind by their companions, and, on the other, frequently rebuked or chastised, will fall into a most unhappy dejection of mind. Despairing of improvement, they will lose all inclination to strive, and all that desire of recommending themselves to the good opinion of their teacher, which ought to be a spur to their diligence, and a guard to their virtue, while he must appear to them not as a kind instructor, and an affectionate friend, but in the odious light of a tyrant and an enemy. If, on the other hand, the teacher tries to accommodate the general lessons of the class to the capacities of the slower, the consequences will be still very bad: for the quick and lively, prevented by that activity which is natural to them, and unprovided with proper objects to employ it, will be in danger of contracting idle and vicious habits, and will disturb and infect their companions; by which means their studies will be retarded, and their minds corrupted. Suppose again the teacher should steer a middle course, which is commonly done, then must the above-mentioned inconveniences fall, though not with less weight, both on the quicker and the slower: in this case, as well as the former, that spirit of emulation which animates every well-regulated school, and which ought to be kept alive by every

innocent device, will find no room to exert itself. It is only where the inequality is inconsiderable, and not where such a difference of capacity may be reasonably expected, that this spirit will be found to operate: for it is natural to imagine, that a boy will then only feel its influence, when he has the prospect that his repeated efforts will, sometimes at least, procure him that pre-eminence in knowledge which is both the object of his wishes, and the reward of his labours.

"Thus we see the advantages which naturally result from a public education, and the reasons for which these advantages are so often lost or impaired. I am sensible that, from the preference which I have given to public education, some will think me partial to my own profession. But man being evidently designed for society, and his most amiable dispositions being those of a social kind, will it not be a considerable advantage for him, to be accustomed from his childhood to the exercise of these dispositions, and trained, by a regular discipline, to the duties of social life? Can any virtues, or any good habits, be taught by private instruction, that cannot be more successfully taught by public education, when properly conducted? It is acknowledged, that some children, of a particular constitution of body, may be better reared in private, during the first stages of life, that is, till the age of 9 or 10 years; but, with this exception, it appears that public education is greatly superior to private. Upon the whole, when we consider, on the one hand, how defective the private scheme of education is towards the preparing of children for society, and, on the other, how much their improvement is retarded, and their morals endangered at public schools, by the inconveniences already mentioned, we may conclude, that till these inconveniences be removed, the most successful plan of instruction will be that, which, avoiding the temptations to which children, in the mean time, would be exposed in all populous cities, and taking a middle course between the extremes of a public and private education, will secure the advantages of the one, without the disadvantages of either.

SECT. IV. *Of the CONSTITUTION and GOVERNMENT of a PUBLIC SCHOOL.*

The progress of children at a public school, will always depend upon the constitution of the school, and the number of the scholars, as well as the abilities of the schoolmaster. The more the school is crowded, and the care of the master divided, the more will the notice which he can take of individuals be diminished. But if he have not a proper number of scholars to assist him, the inconveniences of a crowded school will be much greater: for he will be distressed with a multitude of things, not presenting themselves to him in an easy and regular succession, but all at once soliciting his attention. This must naturally happen when there are several forms, or classes, of boys, all in the school at one time, learning different lessons, and consequently requiring his inspection and assistance. For as he can attend only to one of the classes at once, the other classes, and especially the younger boys, will be tempted to prattle, and to trifle away their time: their noise too

will be very disturbing to the elder and more studious scholars, and particularly to those who are then giving an account of their lessons. Thus the attention of the teacher being diverted from the class which he is examining, he will find himself under the disagreeable necessity of using compulsive methods to silence this noise, and to check this turn for dissipation and disorder. Hence his spirits will be wasted by degrees, and his temper soured. Nor is the situation of his pupils less to be lamented. Tempted to be idle for want of proper assistance, and dispirited by the rebukes and the chastisements which they receive or dread from time to time, they will be in danger of hardening themselves against a sense of shame, and of contracting an aversion to their book as well as to their teacher.

"It is but too true, that this disadvantage must attend a crowded school, consisting of several classes, and unprovided with a sufficient number of ushers. Nor will the most vigilant teacher, with all the assistance that the elder boys can give him, be able to prevent it; for though these may be employed, on some occasions, in assisting and in teaching those who are younger and more ignorant, because the teaching of others contributes not a little to the acquiring of languages as well as of arts; yet if we consider the intercourse that subsists between the elder and the younger boys, as companions, and as schoolfellows, we shall find, that the authority of the former over the latter will not be sufficient to command their attention, and to impress their lessons upon them with that weight which is requisite. Nor is it doing justice to the elder boys to employ them often, much less every day, in teaching the principles of language, or even the lower authors. The chief business of the elder scholars, is to prepare their own tasks, and, by a quick and uninterrupted progress, to proceed in their studies, till they have acquired a critical knowledge of the Latin tongue, and finished the course of their education at school.

"The number of boys in each class, perhaps, should not be above 10 or 12; if it be much greater, it will prevent their improvement, and especially if they are young: for supposing their capacities to be equal, it cannot be expected, considering the restlessness natural to so early a period, that when a boy has answered the question proposed, he will stand, with fixed attention, till it return to him in course. And as it will not return to him soon, nor frequently, where the class is very numerous, he must be often absent in his thoughts; and losing sight of the connection of words in his lesson; he must contract likewise habits of inattention, which will be very inconvenient in life, and very difficult to shake off. Besides, if a boy is disposed to be idle, he will flatter himself that his ignorance may sometimes escape unnoticed in the crowd, and he will take less pains to prepare a lesson of which he is to give an account of so small a part.

"Such are the inconveniences of crowded classes, even when the capacities of the boys are equal, or nearly so; but if they are very unequal, the inconveniences which attend such classes have been shewn to be much greater; all which may be prevented by a proper distribution of the boys

into classes, and by proportioning the number the teachers to that of the scholars. What proportion is, cannot be precisely determined. Something must depend upon the age and the capacities of children. If they are generally under nine or ten years of age, or if the schoolmaster is obliged to teach a variety of things at once English, Latin, writing, arithmetic, it cannot be supposed that one person can give proper attention to more than 20, so young and so variously employed. But if his pupils are more advanced in years, and if they are to be taught the Latin authors with as much geography, history, rhetoric, as ought to be comprehended in the study of the classics, he may, in that case be able to teach from 25 to 35, if they can be raised into two or three forms, without prejudicing their studies. But this is a matter that requires great attention and discernment: for as it is extremely difficult to teach even a thin school where the classes are many, so nothing can be more unprofitable to the scholars or more oppressive to the teachers, than a numerous class of boys, differing in genius as well as age, and reading the same lessons.

"The younger boys should not be confined long in school at one meeting: but during the time they should be kept constantly employed either in giving an account of their tasks, or preparing them under the eye of their teacher. In this there is a double advantage: they will not then learn idle habits at school, nor will they be distressed and stupefied by long application.

"Besides the time which they spend in Latin school, they should be employed for an hour or two after their admission, at least once every day, in reading English, which they would otherwise be in danger of forgetting. They ought also, during the first two years, to spend a portion of their time every day in writing. This sometimes delayed too long, as you will find a boy that understands his mother-tongue before he can write with ease. The Latin exercises, called *versions*, which are commonly prescribed at school, are very conducive if not absolutely necessary, to the knowledge of both languages. Now, till a boy can write with an easy hand, he will be altogether unfit for Latin exercises. The elder boys who are capable of greater application, and more ripe for instruction, should be confined much longer in school, and have greater tasks prescribed. Still a regard must be had to their health; and bodily exercise of proper intervals, is not only to be allowed, but be recommended.

"It will be convenient, where the school is very numerous, that there should be separate apartments for the teachers, in order that the elder scholars, whose behaviour may be supposed to be more manly, may have an opportunity of rearing by themselves, without mingling with the younger, or being subjected to the hurry and noise which cannot be altogether avoided in a crowded school. At the same time these apartments should be contiguous, that the principal teacher may visit them with more ease; and one of them should be large enough to contain all the scholars in time of prayers, and on other public occasions.

*The under-teachers, or ushers, in great schools, should be altogether dependent on the principal teacher. They should receive their directions from him: they should study his plan, and assist him, to the utmost, in executing it. And the principal teacher, in his turn, should take all possible pains to support the authority of the ushers, and to promote their improvement.

*Once in the year, at least, there should be a public examination of every school, at which the parents of the children should by all means attend. This has great influence on the minds of youth: it kindles a spirit of emulation, and a love of honour, among them; it renders their studies more interesting, and more pleasant; it produces habits of early application, which will be an advantage to their studies, and an excellent preparation for business.

*That this examination may have a proper effect, it should be conducted with all that solemnity which is necessary to affect the minds of youth, and all that exactness and impartiality, which are requisite for discovering the real progress of the boys, and the plan of education pursued by the teacher.

*But the most favourable circumstances, and the most commodious regulations, will avail but little, without care and activity in the teacher. It is the spirit of the teacher that rouses the slothful, inspires the dull, and with a magical sort of force, imparts life and vigour to all. To produce this important effect, and render it most beneficial to his pupils, he should strive, by unwearied endeavours, to excite and support in them an ardent desire, not only to improve the talents of the mind, but still more to acquire those dispositions of the heart from which those talents receive their value. And considering what a number of children assemble in a public school, it will require no small discernment to discover their various tempers, as well as to apply the proper culture to each. In applying this culture, the teacher should be himself, upon all occasions, to check the proud, to encourage the modest, to tame the haughty, to humble the proud, to commend the industrious, and well disposed, to rouse the indolent, the diligent, to cure the peevish, to endeavour to make vice appear, not only odious and detestable, but likewise ungentle and incompatible. He should shew his pupils the effects of an irregular indulgence of the passions, especially in the early period of life. He should be severe to those who have been unhappy, and how foolish, as well as how imprudent, they have acted; and he should shew them out, as objects of pity, rather than of contempt, the punishments, which have a tendency to reform the spirit, rather than to reform the heart. He should discourage, on the one hand, every thing that is immoral and unbecoming, and encourage, on the other, every appearance of modesty and goodness of heart; and while he treats them with a taste for industry, and encourages them in virtue as well as in knowledge.

SECT. VIII. PART I.

By a course of discreet and impartial discipline of this kind, he will acquire an authority which he will seldom have occasion to exert; he will support the spirits of his pupils; he will gradually prepare them for acting an useful and honourable part on the great theatre of life.

"If we compare what has been said with the state of education in this kingdom in general, we shall find, that the constitution of our public schools needs much to be rectified and improved. To a reformation of this kind, the want of proper funds is indeed a great and lamentable obstacle. But shall we despair of such a reformation, when we call to mind the public spirit that has lately appeared in this nation, and survey the good effects it has already produced in the surprising improvement of the arts and manufactures among us?

SECT. V. *Of the Education necessary for the INFERIOR RANKS of MANKIND.*

"Those who are destined for employments which depend on bodily strength, need not a very extensive education. It may be enough if they be taught to read the English language, and to write. To this should be added psalmody, and perhaps the first rules of arithmetic. In this manner should they be employed at school. But the rest of their time ought not to be spent in idleness, or unprofitable diversion. Their health, indeed, requires exercise: but that exercise should not be left entirely to their own choice; it should be directed by their parents and teachers, and regulated in such a manner, that, while it contributes to the strength and vigour of the body, it may correspond to the way of life for which they are designed, and serve as an easy preparation for it.* But this is not the only advantage of this method: for by means of it, habits of idleness, so hurtful to the morals of individuals, and so destructive to the state, would be prevented: in their stead habits of industry would be introduced among the common people; and industry, diffusing its salutary influence over the kingdom, would furnish the state with a healthy, virtuous, and happy race.

"Above all, they ought to be carefully instructed in the principles of religion and morality. There is none so mean in his birth, or so indigent in his circumstances, who is not in this respect at least intitled to the care of the public: for we ought never to forget, that we are brethren by nature, children of the same common parent, and sent into this world to improve one another, to instruct the ignorant, and to promote the public happiness to the utmost of our power. To reconcile the lowest class of mankind to the fatigues of constant labour, and the otherwise mortifying thoughts of a servile employment, pains should be taken to convince them, when young, that subordination is necessary in society; that they ought to submit to their masters or superiors in every thing that is lawful; that nature has formed us for action; that happiness does not consist in indolence, nor in the possession

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of

*The operations of husbandry in the country, and manufactures, &c. in towns, might furnish many equally just and profitable to children of this class."

of riches, nor in the gratification of sense, nor in pomp and splendid equipage, but in habits of industry and contentment, in temperance and frugality, in the consciousness of doing our duty in the station in which we are placed; in short, that it consists in health of body and peace of mind; and that these are to be found in the humblest as well as the most exalted ranks of life. They should be taught, that in order to procure to themselves, the good-will and assistance of others, which they need so much, they ought, in their turn, to be benevolent, modest, and obliging. They should be led to remark the pleasure arising in their breasts from doing, or even designing to do good, and the pain and remorse which ever follow the indulgence of malice or revenge.

"In order to restrain them more effectually from furious sallies of passion, they should be led to observe the distracted looks and outrageous gestures of those who are under the influence of unbridled anger; to guard them against intemperance, and every irregular indulgence of appetite, they should be desired to remark the contemptible and fottish appearance of the drunkards, and impressed with a proper sense of their natural superiority to brutes, and of the dignity, value, and immortality of the human soul; to inspire them with an abhorrence of every species of deceit, or dishonesty, they should be taught, that the future state of men will depend, not on the riches which they possessed, nor on the rank which they held, in this world, but on the goodness of their hearts, and the integrity of their lives.

"These and all other arguments which reason suggests to excite mankind to the performance of their duty, should be warmly urged, and enforced by motives derived from religion. The Christian religion, requiring purity of intention as well as propriety of action, and extending the sanctions of rewards and punishments to a future state, will be found to operate more powerfully on the human heart, and will dispose it to the sublimest of virtues, humility, meekness, forgiveness, gratitude, self-denial, submission to the will, and obedience to the law of God.

"If such instructions as these be deeply rivetted in their minds, and if constant attention be given to their morals, it is to be hoped, that, by the blessing of God, they will avoid the dangers to which they may afterwards be exposed, and steer their course through the storms of life with safety and honour.

"To such a degree of education are children of the lowest ranks intitled. But if there should arise among them a boy of an extraordinary capacity, he should be brought forward in his studies, and carried through classical and academical learning: for such a boy is to be considered as a child of the public; and every well disposed person who has it in his power, will think himself obliged to contribute to his assistance. And a humane teacher, besides assisting him to complete his education, will not want further resources for that pur-

pose in the generosity of good men. This is doing a good office to society; for it is reasonable to suppose, that geniuses of the first rate are sometimes be found among the lower, as well as the higher classes of mankind. And it is plain that such geniuses, while debarred from a liberal education, will be, in a great measure, lost to society. Will not this plan bring them forth into light, and give them opportunities of exerting themselves? By improving the understanding, it not enlarge their power of doing good? forming the heart to virtue, will it not teach them to employ that power for the benefit of mankind? By uniting these advantages, will it not increase them the lights, the ornaments, and the blessings of society?

SECT. VI. *Of the USEFULNESS of CLASSICAL LEARNING to PERSONS in the MIDDLE OF LIFE.*

"Opportunities of education," continues Chapman, such as are above described, "are to be confined to boys of uncommon genius, those whose capacities are but middling, if the circumstances of their parents be more open, ought to be taught natural history, with the useful parts of natural philosophy, and to be instructed in classical learning. This, when attended with discretion, is attended with advantage to be equalled by any other kind of instruction. A classical education is the most effectual of giving a young man a critical knowledge of his mother-tongue, which may be very useful; it furnishes him with the best opportunity of forming his taste, by opening to him an acquaintance with the best models in every species of literature; it procures him a fund of the most rational entertainment, by discovering to him the sentiments of the most enlightened among the ancients, not disfigured by translations, but adorned with all the beauties of the Roman classic; above all, it strengthens, humanizes, refines, enlarges the mind, and lays the foundation of a happy and useful life. For the composition of the ancients which are read at schools, especially those of the historical or philosophical kind, not only the truest standards of fine writing, but sure barriers against a general depravity of taste; but passless such charms, that, when judiciously taught, they take hold of the minds of the young, and inspire them with a love of virtue, and a horror of vice, by presenting incitements to the former, and dissuaves from the latter, from weighty reasons, and enforced by striking examples."

"Add to all this, that the study of the original language of the New Testament, lets us see, with our own eyes, the full light of the gospel, and the road to eternal happiness.

"Under the notion of a classical education here comprehended the study, not only of English and Latin, languages, but also of natural philosophy and ancient history, particularly

* "See Dr Beattie on the Usefulness of Classical Learning: Mr Cornish's Importance of Classical Learning: *The Monthly Review* for Dec. 1779, and the rev. Mr Knox's *Essays*."

Greece and Rome, with a general view of the history of England, some knowledge of the Greek language, and the figures of rhetoric.

"Can 4 or 5 years, that is, from 10 to 14 or 15, spent in these studies, and under this moral discipline, be said to be thrown away? Can that period be employed to better purposes? Is it not the great business of education, to instruct and civilize mankind, and to form them for acting an useful part in their several stations? And has not this method a manifest tendency to promote so valuable an end? Will not such instruction, and such a discipline, be an infinite advantage to a young man, if he is to be a merchant, a farmer, an artificer? Will it not give him an evident superiority over his more ignorant and more undisciplined brethren? Will it not be a very proper preparation for him, if he is born to an opulent fortune, or if he is endued with a superior genius, and destined to a learned profession? Will it not smooth his way to the sciences, and quicken his progress through them, when he is sent to prosecute his studies at the university?"

"One of the advantages of a classical education deserves more particularly to be mentioned. By the taste for reading which it both inspires and diffuses, we are enabled to spend a vacant hour in an agreeable and instructive manner. What an advantage will this be for gentlemen who have acquired an opulent fortune, when they retire from the active scenes of life? Many there are, who, amidst all the conveniences that affluence can procure, are often at a loss how to entertain themselves in their retreat, and know not how to enjoy the fruits of their industry with dignity and satisfaction. Devoured by languor, and all the maladies of an unemployed mind, for want of a proper taste for books they find themselves under a preposterous necessity of flying, in the decline of their years, to childish amusements for relief; and of spending, in trifling and folly, that period of life which every wise man would wish to employ in a way more rational, and more improving."

"It will be objected, that these advantages do not always appear, in the taste and manners of those who have had a classical education. This is undoubtedly; but this defect is not to be imputed to the insufficiency of such an education, which has a natural tendency to produce these effects; it is to be imputed to the parents, who neglect the morals of their children; and to those teachers, who, for want of proper assistance, drive their pupils through the classics in a way equally harsh and precipitate. Thus the best medicines may be rendered ineffectual, when unsupported by a proper regimen, or abused by the unskillfulness or negligence of those who administer them."

"As the student is now arrived at 14 or 15 years of age, and may be supposed to be well acquainted with the Latin classics and the Greek Testament, the bias of his genius, which by this time has discovered itself, will point out that way

of life where he will have the best chance to succeed. This full display of his genius will serve as a clue to his parents and tutors, and prevent the absurd and cruel practice of pushing a boy through the sciences, when nature has not smoothed the way for him, on the one hand, or of condemning him to the more laborious arts, when his capacity is quick, on the other.

"Children who are intended for the more ingenious handicraft employments, if, after the study of the classics and the common rules of arithmetic at school, they be taught the principles of mathematics, will have no occasion for farther preparation; but, thus trained, may be safely put to an apprenticeship; which is the best way of acquiring a dexterity in a mechanical employment."

"Those who are destined for agriculture, should be instructed in the simplest principles of mechanics, the nature of the different soils in the parish or county where they reside, the culture adapted to them, and the methods of the best farmers in this island. This will not appear so chimerical, or useless, if we consider the laudable progress which some of our gentlemen have already made in improving their estates, and the tendency that such a preparation would have to diffuse the like spirit among the lower people; as it would both inspire them with an early taste for this useful art, and direct them in the exercise of it. And it would be an instance of public spirit, if any gentleman of ability and experience in this way would digest, in a plain and easy style, his own observations on this subject, and communicate them to the public: He might render such a work more extensively useful, if, out of the multitude of books which have been written on husbandry, he would take the trouble to make a collection of those methods which have been pursued with most success, and which seem to be best suited to the soil and the climate of our country."

"It is to be regretted, that the mistaken views, and ungoverned passions of men, should render the profession of arms necessary. As Providence has made ample provision for the wants of mankind, how happy should we all be were we taught to study the true art of life! How certainly should we find our happiness in contributing to that of others! How delightful a feat would this earth be, if war and all its horrors were no more! And how amiable a picture would mankind exhibit, thus loving and cherishing one another!"

"But till that happy period arrive, and the passions of mankind be turned into their proper channel, it may be no small advantage for those gentlemen who are destined for the army, or navy, to be properly educated and prepared for a way of life, which is so dangerous to the morals of ignorant and unprincipled youth. For this purpose, they should be trained up, with the greatest care, in the principles of religion, and just notions of virtue and honour; and together with a classical education, they should be taught the French language, mathematics, especially the practical parts,

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such

"A small collection of this kind, intitled, *Select Essays on Husbandry, and also other useful treatises on the subject*, have been published since this Essay was composed; and it is with pleasure we observe, that agriculture makes daily progress among us; and that a professor of this useful art is already established in our universities."

such as geometry and fortification, with natural philosophy, and the best books, both ancient and modern, on the art of war. To this should be added frequent exercises of the epistolary kind, a branch of education useful indeed to all who have business to transact, whether public or private, but especially to gentlemen of the army. These have occasion frequently to relate their military operations, which should always be done in a clear, distinct, narrative style.

"With such preparation as this, they will be more capable of serving their king and their country with reputation and honour. It is but too just an observation, that young gentlemen are often hurried into the army, or navy, without the advantages of a liberal education: while the youth who are bred to other professions have a laborious course of instruction to undergo, those on whose ability, courage, and integrity, the fate of their country may perhaps depend, are thought to need but little previous culture for so important a charge. But this is a fatal error; it is impossible for ignorance, and especially in military men, to inspire that fortitude, and that manly resolution, which are natural to a man, who, being directed by an enlightened understanding, and enlivened with the joys of religion, is armed, by the uprightness of his heart and the innocence of his life, against the terrors of death, and the apprehensions of misery in another world.

"As for the private men, both of our army and navy, the low circumstances in which they are born, allow not of so extensive an education: yet if instructed, like others of their rank, in reading English, in writing, and arithmetic; if brought up from their earliest years in the principles of religion and virtue, and accustomed to a hardy, sober, and frugal way of life; no longer would they be distinguished for impiety and profligacy of manners; no longer would they be observed to spread the infection of their example from town to town among the lower, the younger, and the more ignorant part of our people.* On the contrary, improving that natural courage, which they derive from the genius of the British constitution, soon would they exhibit to our view the lovely virtues of sobriety, hardiness, fidelity, intrepidity, public spirit, piety, and magnanimity. Who would face the enemy with more undaunted resolution, than he whose heart and hands are innocent; who fights for his king and the public liberty from principle, rather than from slavish and mercenary views; who loves his country, and the great society of mankind; and whose mind is at peace with God, and shrinks not back at the prospect of approaching eternity?

"But as the defence and the liberty of this island must always be connected with the mode of education that shall generally prevail, it would be an advantage to the public, that boys, when they arrive at a certain age, suppose 14 or 15 years, should be trained to arms, and publickly exercised for that purpose an afternoon every week, or every fortnight. To prevent accidents, to which

their inexperience would expose them, their arms might be lodged in proper places, through the different parishes, and the boys should have no access to them but when they were to be publickly exercised. This practice being continued at stated intervals, during the stage of manhood, as well as of youth, would form a constant well-trained militia, save a great part of the expence occasioned by a standing army in the time of peace, and prove an excellent seminary for recruiting its forces we might have occasion to employ abroad in time of war.

"To carry on so extensive a course of education, and adapt it to the various occupations of mankind, it would be necessary, that, beside the public schoolmaster already established in every parish, there should be one or more teachers of the English language in boroughs and populous villages, in proportion to the extent and population of the place. In like manner there should be, in every considerable town, teachers of book-keeping, geometry, drawing, algebra, navigation and mechanics. These should explain the nature of trade, to such as are intended for that way of life; and give them, among other things, a just idea of the produce and various manufactures of this island, and the branches of commerce which it carries on with foreigners, and with its own colonies. The French tongue, if required, may be taught at separate hours.

"As for writing and arithmetic, they should be taught, as well as the English language, in the parish schools.

"Here it is to be observed, that as the province of all these teachers, is to attend to the morals as well as the studies of their pupils, they should be persons of a cultivated mind and solid judgment; persons steady and exemplary in their conduct, and conscientiously attentive to the conduct of their pupils. Suitable encouragement should therefore be given them, and proper attention paid to their schools. This would procure respect to the persons and give weight to their authority, and thus the different teachers would support one another, and jointly promote the great end of education, which is to make good men and useful members of society.

"From what has been said, it will appear, that it is not the intention of this plan, to diminish the number of that necessary class of men, who are to subsist by the labour of their hands. It is not intended to tempt the labouring people by means of learned education, to despise, or neglect the duties of that station in which Divine Providence has thought fit to place them; but it is intended to proper instruction to train them up to habits of industry and contentment with their lot; and it is intended, above every thing to preserve the innocence of children, in the lower as well as the higher ranks of life; to season their minds with piety and virtue, and to prepare them, by an early and prudent discipline, for the different duties of life. I say, by an early discipline; for it is to be repeated again, that the sooner we form the minds of children

* "From these strictures on the private men of our army, it is but justice to except many individuals, and to acknowledge, that some regiments are much more regular in their manners than others."

children, by teaching them to make a right estimate of things, and by accustoming them to act accordingly, the less they will be infected, as they grow up, with irregularities of temper, and extravagancies of passions. Hence education will become more delightful both to the teacher and the learner. And as children must be left, for the first 5 or 6 years, to the care and discipline of their parents*, these should take all possible pains, during that critical period, to preserve them from false and destructive associations of ideas, and to keep them as much as possible from the society of corrupted or neglected children: and they should lead them to school betimes, not that they may be oppressed with reading, or tortured with lessons which they cannot comprehend, but that bad habits may be prevented, their diversions regulated, and suitable tasks prescribed; and that this moral discipline, with the virtuous dispositions which it tends to inspire, may be rendered familiar to them."

SECT. VII. *Of the EDUCATION of WOMEN.*

Upon this important subject, we shall select the following judicious observations from Dr Chapman's excellent Treatise, which he modestly styles "Hints concerning the education of the FAIR SEX."

"The fair sex are capable of a very high degree of improvement, and the assistance of the mothers is of great consequence towards carrying on any general plan of education; because of the authority with which they are invested, and the opportunities which they have of instructing their children, and of forming their tempers; but to give proper directions for the education of those in the higher ranks of life, would require abilities far superior to mine, and a more extensive acquaintance with the fair sex than I can pretend to. I shall therefore leave a system of education for the ladies, to be given by those who are equal to so delicate a subject,† and shall confine myself to a few hints on the education of women in the lower stations of life.

"As they are capable of instruction as well as the men, and, like them too, accountable for their actions, the very meanest among them should be taught to read the English language, to sing the church tunes, and to write. And to this may be added the common rules of arithmetic. Above all, the greatest care should be taken to instruct them in the principles of religion and morality,

and to superintend and direct their conduct. For this purpose they should be sent to the parish schools, either in company with the boys, or rather by themselves, and at different hours. Humanity, nay justice, and a regard for the public good, require this care to be taken of the women. Are they not recommended, by the feebleness of their sex, to the care and protection of the men? Are they not partakers of the same nature? Are they not endued with the same powers of mind? Would not this early attention to their minds and morals render them more diligent and more faithful servants? And when married, would it not render them more capable of instructing their children, and more attentive to their behaviour?

"In forming their minds, particular care should be taken to point out those qualities which are most ornamental to their sex, such as cleanliness, neatness of dress, modesty, sweetness of temper, industry, sobriety, frugality. And as the women, thus educated, will make it their study to acquire the proper accomplishments, and the distinguishing virtues of their sex, a desire to please them will animate the men, and prove an additional motive to regularity and decency of behaviour.

"They should also be carefully instructed, when young, in all the branches of domestic economy, especially in the dressing of victuals, in sewing, spinning, and knitting. To be mistress of these and the like accomplishments, will be considerable advantages to a young woman: it will help to recommend her to a husband; it will compensate to her the want of a fortune.

"Among other things, young women should be deeply impressed with a sense of character, and taught the infinite difference between virtue and vice, with the inseparable connection between innocence and happiness on the one hand, and between guilt and misery on the other. And it is hoped that, if this plan were put in execution, it would have a great effect in improving the minds of both sexes, in restraining that propensity to illicit amours, which is so much complained of in young gentlemen, and in extinguishing that taste for luxury and idleness, which is known to have so baneful an influence on the strength, the populousness, and the prosperity of a nation. These obstructions being removed, our truer and more lasting happiness would no longer elude our search: it would be found in a married state, as it can arise only from the possession of a virtuous and

"In towns and villages, it would be of great consequence to the health and innocence of children, during the first period, that is, from 3 to 5 or 6 years of age, if parents would divide them into select sets, and commit each set to the care of a sensible, prudent, elderly person, whose business should be, not to give them formal lessons, but to preserve them from dangers, from bad habits and bad companions, to invent proper amusements for them, to superintend their diversions, and for that purpose sometimes to assemble them in a convenient room, and sometimes to go along with them into the fields, &c.

† On this subject young ladies, from the age of 6 to 16, may read with advantage, Mrs Barbaud's *Easy Lessons for Children*; Mr Berquin's *Children's Friend*; Mrs Trimmer's *Sacred History*; Dr Gregory's *Advice to a Daughter*; Milles Magazine, and Young Ladies Magazines; *Asb's Sentiments on Education*; Holcroft's *Translation of Tales of the Castle*; Instructions for a Young Lady in every stage and period of life; Mrs Chapone's *Letters on the Improvement of the Mind*; A letter from a mother to her daughter at a boarding-school; *Thoughts on the Education of Daughters*, by Mary Wollstonecraft, &c. Dr Chapman adds a list of many other books, for which we must refer to his *Index*, p. 82 and 83.

and amiable woman, the friend and companion of life.

“As to children of the lowest rank, and of both sexes, who, in consequence of the poverty and depravity of their parents, are generally and necessarily trained up to beggary and vice, no method of rendering them virtuous and useful members of society will be found more effectual, or more humane, than that which has been lately pursued in (BANER,) a small town of North Britain. In that town, by establishing a fund for a salary to a well qualified teacher, and by a judicious union of industry with instruction, a happy and wonderful reformation has already taken place among the children of the poor. That numerous clans, formerly sunk in wickedness and misery, are now acquiring habits of industry accompanied with useful instruction; and are contributing, many of them, to the support of their parents as well as themselves. It is to be wished, and may indeed be expected, that the reverend and learned author of this excellent institution will soon publish a particular account of it, and of the effects which it has already produced; that other communities may be induced to adopt a similar plan, when they see that an effectual scheme for reforming the poor in general, and rendering them useful to society, (a scheme sought for in vain by the wisest laws, and by the well intended institution of *Sunday schools*), is here exhibited, as actually carried into execution, and producing the most salutary effects.”

SECT. VIII. *Of the QUALIFICATIONS and DUTY of TEACHERS.*

Such are the general outlines of Dr CHAPMAN'S excellent plan of Education. His remarks on the Qualifications and Duty of Teachers are no less judicious. “The teacher (says the Dr) should be well acquainted with the classics and the belles lettres in general, and with the Latin tongue in particular, not ignorant of logic, versed in arithmetic, the mathematics, natural and moral philosophy, with a general knowledge of natural history and astronomy. These studies are a very proper exercise for the powers of the mind, which they are found, in a surprising manner, to open and enlarge. To academical learning he should add some skill in agriculture, if he intends to teach in the country.

“He ought also to be expert in geography and civil history, ancient as well as modern; to have a good taste in books; and to have been frequently in the company of well bred and accomplished persons of both sexes; for such company is the best preservative against that affectation and pedantry, which so often and so disagreeably distinguish the scholastic and the recluse.

“Much should he study the art of communicating knowledge. Without this talent he must be altogether unfit for the business of teaching, whatever his other accomplishments may be. So confined are the ideas of children, and so unprofitable, as well as disagreeable, is every lesson which they cannot comprehend, that the teacher should take the greatest care to accommodate their tasks to their capacities and years, and to repeat his instructions in a simple, familiar, and perspicuous style, till he find they are clearly and fully under-

stood. Thus the attention of his scholars will be fixed, and their studies rendered easy and agreeable.

“He should strive likewise to discover the genius and natural bias of his pupils, and communicate his discoveries to their parents: for this purpose he should attend to their diversions and amusements, the questions which they put unsolicited, the objects, and the subjects of literature, with which they are most entertained.

“He should consider, that he does not perform his duty to his pupils, unless he render them highly sensible of the advantages of early study, and accustom them to it. These advantages are very great: in youth the mind imbibes instruction more easily, and retains it much better; and an early habit of study, if it be well directed, and tempered with proper exercise, fills up, both with profit and pleasure, those hours which would otherwise be spent in dissipation and folly. Besides, the sooner that useful knowledge is acquired, the sooner and more effectually is its possession secured from error and deception, from pedantry and pride; the sooner he begins to be distinguished, trusted and employed; the sooner he becomes acquainted with human nature and himself; and consequently the sooner he is enabled to form just rules of conduct, and to act with propriety and prudence.

“No less pains should the teacher take to instruct his pupils in the use of knowledge, and direct them how to employ it. Now man being designed for action as well as contemplation, that sort of knowledge will be vain which does not prepare him for social life, and instruct him in his duty to God and to man. This is its truest and noblest end; and by keeping this in view in all our studies, we shall at length become good men and good citizens, happy in ourselves, and useful to others.

“The teacher ought also to be well assured, that his constitution, as well as inclination, is suited to this way of life, and capable of confinement and drudgery. If the body be indisposed, the mind will not exert itself with that vigour which is particularly necessary in this profession. Nor ought he to be diverted from the duties of his office by a separate employment, or by any avocations whatsoever. For which reason, who ever undertakes the education of youth, either in a public or private capacity, ought to form an unalterable resolution, to dedicate his time and his study to that important task. He ought not to consider his office, if he is a public teacher, as a provision for life, and an establishment for indolence; nor if he is a private tutor, ought he to look upon it as a matter of inferior moment, and a disagreeable, though necessary step, by which he may rise to a more elevated station, or acquire a more considerable fortune in the world. Pious and ingenuous in his mind, prudent and humane in his temper, regular and polished in his manners, temperate and plain in his way of life, of all mankind he ought to have the fewest faults and foibles, because the bad example of a man, who is every day employed in teaching morality, as well as language, will naturally have a most pernicious influence on the soft and flexible minds of children.

rea, who are to receive their impressions in a great measure from their teacher. To an entire command of his passions, and a justness of sentiment, both with respect to religion and politics, he should join a superiority to party spirit, and an aversion to all slavish and enslaving principles. Above all he ought to have an honest and upright heart, and a sincere desire to be useful to the children under his care. This ought to be the delight of his soul, and the great motive of his actions; it is this motive, that above every thing else, should have determined him at first to enter upon this way of life. Without a natural taste for communicating knowledge, and an earnest desire of being useful to his pupils, he will neither be happy in his charge, nor so successful as its importance requires.

"Nor is it sufficient that the teacher should have the qualifications and dispositions already mentioned; it is also necessary that he should be invested with an unlimited power over his pupils, and that his authority should, on every occasion, be supported by their parents. Without this, all the efforts of the teacher in educating the child will prove ineffectual. For which reason, parents ought to have an entire confidence in the fidelity, as well as ability, of the teacher, before they commit their children to his care, and to neglect nothing that can strengthen his hands, when once they have bestowed on him so important a trust. No less attentive should the teacher be to support the authority of the parent. Parents and teachers should confer together on every occasion; by their united exertions, the most naughty or refractory boy would, very probably, be reclaimed, without that severity, which indiscretion and the want of a well supported authority, render as vain as it is disagreeable. But though the authority of a teacher over his pupils ought to be fully established, yet its surest and most agreeable foundation will be a sense of character, with which he should study to inspire them, and on an apprehension of displeasing him, rather than a servile fear of punishment. At first, indeed, in the case of gross negligence, or dissipation of mind, greater strictness is to be used, in order to fix the attention; and if the boy is of a refractory disposition, some chastisement may be necessary to render him tractable. This, however, will be necessary only when he has been much neglected in his first years, or corrupted by indulgence. But when the temper is once rendered pliant and docile, the severity of discipline is to be relaxed, and the distance between the teacher and the scholar to be gradually diminished; till a free and easy intercourse take place between them*. This connection being formed, how delightful is it to teach, as well as to be taught, and how wonderfully does the mind improve both in knowledge and in virtue!

"As for the under-teachers, or ushers, in great schools, they should be persons of an irreproachable character, and of great skill in classical and academical literature, with no small share of pru-

dence and good temper. And as they will acquire experience under the direction of the principal teacher, and as experience is of great use in qualifying a man for the education of youth, the public schools may be supplied from these ushers, with ablest teachers from time to time.

SECT. IX. Of the SALARIES and PERQUISITES of TEACHERS.

DR CHAPMAN, from whose excellent *Treatise on Education* we have borrowed the preceding extracts, devotes his 7th section to the consideration of the *Salaries of Schoolmasters*, which, he justly observes "ought to be much greater than they are at present, and should be such as would excite persons of good capacity, and of a liberal education, to apply themselves to this profession." He insists, that the provision to be made for a public teacher should consist partly of a stated salary, and partly of the perquisites of the school: These when joined together, should be such as would place the teacher in easy circumstances, and enable him to support a family, and to educate his children. For (he justly argues) if he is either depressed in his mind, or diverted from his business, by the cares which are inseparable from indigence, he will neither be happy in himself, nor useful to his pupils.

"The fees for the English language, (continues the Doctor) ought to be very small, as most parents subsist by their daily labour, that branch of education, to which the poorest as well as the richest are entitled, ought to be rendered as little chargeable as possible. But this should not restrain the generosity of an opulent parent, if he think the teacher is faithful in his office."—"Children of the lowest class, (he adds in a note,) whose parents cannot afford to give fees, ought to be taught at the expence of the parish, to read the English language, to write, and to sing the church tunes."

"For writing, and the common rules of arithmetic," Dr Chapman proposes, that "the fees should be higher, and for the classical and mercantile branches higher still. In fixing the provision to be made for a parish schoolmaster, the great business will be, so to adjust his salary, and the perquisites of his school, that the former may raise him above indigence, and the latter may prove an additional, though subordinate, motive to quicken his industry."

Here an objection may naturally strike the philanthropic reader to this part of the Doctor's plan, wherein he proposes *presents* and *perquisites* to be given by the opulent parents to the teacher, as tending to produce partiality in favour of the children of the rich, and proportional neglect of those of the poor. The Doctor seems to have anticipated this objection, when he says, "A conscientious teacher, superior to mercenary views, will do justice to the poorer as well as the richer scholars.—But still it will give him pleasure, to see those parents, whose circumstances admit of it, volun-

* "From this view of the qualifications and duties of a teacher, parents may judge, whether a young man who has not had the advantage of experience, be a fit person for educating youth. Would it not be proper, that such a person should be previously employed, for two or three years, as usher to some considerable school?"

voluntarily and cheerfully offer him a token of their gratitude for his fidelity to all who are under his care."

That a few teachers may be found, who act upon such principles of justice and impartiality, we can believe; and that Dr Chapman himself is one of those few, we have been assured. Indeed the credit he here gives to his brethren preceptors, for possessing these virtues, is a strong evidence, that he himself is endued with them: for the virtuous are always ready to suppose, that others are influenced by the same motives that sway their own conduct. But that the majority of teachers cannot be expected to act so conscientiously and disinterestedly, we may venture to affirm, without breach of charity. That "a gift blindeth the eyes of the wise," is a truth long ago remarked. (Deut. xvi. 19.) And the French legislators, in their new "*System of PUBLIC INSTRUCTION and National Scientific Establishments*," have proceeded so much upon this principle, that in the establishment of their *Ecoles Primaires*, their primary schools, both salary and perquisites are abolished with regard to the parents, the professors and masters being paid from the national treasury. In these primary schools, not only reading, writing, French grammar, and arithmetic, but the elements of geometry, geography, agriculture, and republican morals, with an explanation of the principal phenomena and productions of nature, are taught *gratis* to all—to the children of the most obscure villagers, as well as those of the most wealthy citizens, from one end of the republic to the other;—every head of a family without exception being compelled by law to send his children to them for instruction." **SEE INSTRUCTION, PUBLIC.**

But as such a plan can only suit a system of republican equality, we shall return to Dr Chapman, who "acknowledges and laments the difficulty of raising a fund for the payment of the salaries proposed," by his plan. "But the importance of the object in view (he says) and the readiness of mankind to promote any scheme, wherein they think their interest is greatly concerned, will not allow us to despair.—If the exigencies of the state will not allow us to hope for an immediate supply from that quarter; if the liberality of the great is already diverted into other channels, and if nothing can, or ought to be imposed on the poor, it is hoped, that till proper salaries be established, the richer parents, who must be so great gainers by this plan, will not think it hard to meet in their respective parishes every year, or every 5th year, and voluntarily tax themselves to raise a fund for that purpose."

Here the worthy Doctor urges a variety of arguments for the execution of such a philanthropic plan, for which we must refer to his Treatise. But though we think his reasoning just and abundantly strong, we are not equally sanguine in our hopes of his plan being speedily carried into execution. Our despondency arises not from any suspicion, that the rich and the great, in general, will be prevented by parsimony from entering heartily into the measure recommended by the Doctor. It is founded upon that aversion of late evidenced by too many of the higher ranks, to contribute to increase the means of acquiring know-

ledge among the poor. This they are oftener than once accused of, in Sir John Sinclair's *Statistical Account of Scotland*; in which the very small encouragement given to schoolmasters, and the pernicious consequences of this to society, are repeatedly taken notice of, and relief to that useful body of men, by encreasing their salaries, earnestly recommended, both on the principles of humanity and sound policy.

Mr William Barclay, schoolmaster of Cadder, in Lanarkshire, in his *Statistical Account of that parish*, (Vol. viii. p. 480.) after mentioning, that "100 scholars pay only £. 22. 10 s. 0 d. sterling per annum, to all the *four* schoolmasters in the parish, for education, which is but 5 l. 12 s. 6 d. to each," adds, "this is surely too little to support with any decency a class of men confessedly useful, in this expensive and wealthy age. To better the condition of the people of this country, more encouragement should be given to teachers, to enable them to pay proper attention, to improve the morals of youth under their care. The want of this must more or less affect the rising generation. When an attempt was made some time ago, to have the condition of the schoolmasters of this country somewhat bettered, the argument by which some lords and gentlemen opposed it, was, that '*they wished parish schools were suppressed altogether*, because their servants were corrupted, by being taught to read and write: That they would be more obedient and dutiful, were they more ignorant, and had no education.'—This however, Mr Barclay adds, is not the opinion of any gentleman in this parish." It is farther added, in a note, (p. 481.) "This illiberal idea is refuted by fact. That ignorance cannot be the mother of morality more than of devotion, is proved by experience. The good behaviour of the lower ranks of Scotland, in general, contrasted with the immoralities, crimes, and annual executions, of many of the same class in the sister kingdom, can be ascribed to nothing so much as to the superior advantages the former enjoy, of early education, and proper instruction in the first principles of moral and religious duty. Deprive them of these, and they will soon become as great savages as the most ignorant rabble of London, Paris, or Birmingham."

But lest Mr Barclay, being a schoolmaster, should be deemed partial to the cause of his brethren, we shall adduce the evidence of a clergyman, who never was a schoolmaster himself, but who on the contrary, is a gentleman of landed property, and a justice of the peace. The rev. Mr James Muir head of Logan, minister of Urr, has the following spirited remarks on this subject, in his *Statistical Account of that parish*; Vol. XI. p. 79.

"It has been observed with justice, that when the mere labourer is not encouraged and enlightened by the man of letters, human industry and ingenuity too, will be stationary. We may go farther, and affirm that they will be retrograde. Ignorance as naturally propagates ignorance, and far more easily, than knowledge does knowledge. In an extent of country, so large as that comprehended in the parish of Urr," (which is 13 mile long, and above 4 broad) "more schools than now would be necessary. The salary of the present schoolmaster is 200 merks Scotch, and from this

pittans

peñance ; i. sterling is abstracted, for the hire of a person to keep a school in the moorish part of the parish. For such encouragement it is not to be expected, that teachers of very respectable qualifications can be found. It is the cry of many affluent people, however, ' The most indifferent schoolmaster can teach a young person to read and to subscribe his name. This is education sufficient. Why should we make our tenants and cottiers better men than their fathers ? ' To mention no other absurdity contained in this argument, several gentlemen holding this language, seem to be little aware how they expose their own families to the recollection of the world. As to ignorance of history, it may be well excused when people do not remember their own grandfathers. As to those also who think that ability descends by entail, or is secured by feudal title, it would be wished their opinions were more frequently justified by their conduct. The jealousy which the more powerful and affluent part of society have shown for some time past, with respect to the extension of knowledge, might profitably be contrasted with the conduct of Scotland, for at least an age after the reformation. If inattention to the wants of the public, in respect of religious, moral, and even useful instruction, much longer prevail ; if contempt and harshness towards those most oppressed and most deserving citizens, called *Parish Schoolmasters*, remains unabated, people, who have most to lose have most reason to dread the consequences. *Nil veri, nil fanzi, nulla deorum metus, nulla religio*, may soon be the character of any man or any number of men."

Mr MURKHEAD, after obviating the objection that "religious and moral instruction devolves upon the clergy," and showing that "a foundation must first be laid for their labours" by the Schoolmasters, observes, that "of late years the courts of law and the landed interest have entirely superseded the clergy in the management of parish schools. Heritors will not so much, as allow a minister to vote in the choice of a schoolmaster. They will choose him from year to year ; they will pull into payment a salary of L. 10 ; and the parish minister is neither able to dispute such proceedings in a law court, nor is it believed that he would be heard, if disposed to ask redress. The consequence is, that a parish school is now a momentary, or at least a temporary employment for some needless person of ability ; or a perpetual employment for some languid insignificant mortal, barely deserving the shelter of a charity workhouse. Let us contrast with this statement, the character of schoolmasters in Scotland for 100 years after the reformation : Let us remember, say, the character, which the inhabitants of Scotland maintained, and the figure they made among foreign nations, during that and even subsequent periods : Let us advert to the laws of the state, and of the church respecting the provision made for schoolmasters, and the qualifications expected in them : Let us recollect, too, the periods when these laws were framed, and the men who framed them. Things are now changed. If a clergyman considers his parish on religion, he finds they cannot read the bible : if he speaks of morality, they answer him with a stare ! Learning and literature

are out of the question." Mr MURKHEAD, after arguing at considerable length on the subject, concludes thus—"It has often been observed, that a religious establishment can only be dispensed with in a republic, *if there*. Those in power, however, are no doubt best judges, how far the expense of the church is an object, when the present form of government is kept in view ; in which expense undoubtedly, the establishment of proper schools ought to be included."

When such schools shall be established, with proper salaries, we may reasonably hope, with Dr Chapman, that "persons of good capacities, and of a liberal education will be found, who will not disdain the instruction of youth :"—but that "invited by the probability of success, and the prospect of esteem, many will ardently devote themselves to the god-like task, of forming the minds of youth, and preparing them for the various duties of life."

PART II.

PRACTICAL DIRECTIONS FOR THE EDUCATION OF CHILDREN.

SECT. I. Of the MANAGEMENT of CHILDREN in INFANCY.

Of all animals MAN comes into the world in the most feeble and helpless condition. No other animal, therefore, requires such early, constant, and long continued attention as he does.

In this stage of his existence he can hardly be said to be a subject of education, at least in the modern and ordinary sense of the word. To talk of a mother or nurse educating a child at the breast would appear ridiculous. Yet nothing is more certain, than that the first ideas a child conceives,—the very foundation stone, as it were, of his after acquisitions of knowledge, take their rise at this early period. M. ROUSSEAU, therefore, traces the education of a man from his very birth. "Before he can speak, before he can understand, says that author, he is already instructed. Experience is the forerunner of precept. The moment he knows the features of his nurse, he may be said to have acquired considerable knowledge."

But with all due deference to that celebrated genius, man is, at this early period of existence, much more an object of care and management than of education. We agree with Dr Chapman, however, that as "the influence of his body over his mind is great, every plan of education ought to provide for the health of the former, as well as the soundness of the latter." Upon this subject the Doctor lays down several excellent rules, respecting the treatment of the child immediately after birth ; its sleep and food ; the propriety of mothers nursing their own children ; the choice of a nurse, if necessary ; her duty and diet, &c. for which we shall refer to his Treatise, (p. 104—110.) and which we have the less occasion to quote here, as the subject will be resumed under the article NURSING.

The dress of children, but especially of infants should be light, thin and easy. The practice of binding up their limbs in swaddling clothes is hap-

piety exploded. It is indeed astonishing, that it should ever have been adopted, and still more, that it should have so long, and so generally prevailed. "With us," says the Count de Buffon, "an infant no sooner leaves the womb of its mother, and has hardly enjoyed the liberty of moving and stretching its limbs, than it is clapped again into confinement. It is swathed, its head fixed; its legs stretched out at full length, and its arms placed straight down by the side of its body. In this manner it is bound tight with cloths and bandages, so that it cannot stir a limb," &c. But these barbarous exertions of anxiety, but ill-directed care, are now nearly, if not totally abolished. They were kindly intended to prevent deformities, but they operated only to torture the child, and to produce them.

The clothes of children should be made so loose and wide, as to leave them the full and free use of all their limbs, without obstructing the circulation of the blood by ligaments of any kind. The dress recommended by Dr Chapman is "A thin night cap, a flannel waistcoat without sleeves, a petticoat and gown of light stuff; a thin flannel skirt for the night", and "no shoes or stockings till they are able to run abroad."

If too warm clothes are hurtful to children, the custom of sitting near a fire and of sleeping in warm rooms is still more so. Such habits tend to relax the muscular strength of the body, and even in some degree to enfeeble and enervate the powers of the mind. The mother who has milk and strength to nurse her child, and yet gives it up to the care of a mercenary nurse, acts an unfeeling and unnatural part: but she who carries her maternal affection to excess, though she acts from a better principle, deviates no less from the paths of nature.

It is doubtless an error on the side of virtue, but it is an error often attended with bad consequences to the child, when, instead of neglecting the duties of a mother, a woman carries them to excess; when she makes an idol of her child; increases its weakness, by preventing its sense of it; and, as if she could emancipate him from the laws of nature, prevents every approach of pain or distress; without thinking, that, for the sake of preserving him at present from a few trifling inconveniences, she is accumulating on his head a distant load of anxieties and misfortunes; without thinking that it is a barbarous caution to enervate and indulge the child at the expence of the man. Thetis, says the fable, to render her son Achilles invulnerable, plunged him into the waters of Styx. This is an expressive allegory. The over fond mothers act directly contrary: By plunging their children in softness and effeminacy, they render them more tender and vulnerable; they lay open, as it were, their nerves to every species of afflicting sensations, to which they will certainly fall a prey as they grow up. The course of nature is quite different. She continually exercises her children, and fortifies their constitutions, by inuring them early to grief and pain. In cutting their teeth they experience the fever; griping colics throw them into convulsions; the hooping-cough suffocates, and worms torment them; and their blood, by throwing off various purulent

matters, subjects them to dangerous cutaneous eruptions. Almost the whole period of childhood is sickness and danger, half the children that are born dying before they are 8 years old. In passing through this course of experiments, the child who survives them, gathers strength and fortitude, and, as soon as he is capable of enjoying life, the principles of life become less precarious. Experience shows, that children delicately educated die in a greater proportion than others. Provided they are not allowed to exert themselves beyond their powers, less risk is run by exercising, than indulging them in ease. Inure them therefore by degrees to those inconveniences they must one day suffer. Harden their bodies to the intemperance of the seasons, climates, and elements; to hunger, thirst, and fatigue; in a word, dip them in the Stygian flood. Before the body has acquired a settled habit, we may give it any pleasure without danger; but when it is once arrived to its full growth and confidence, every variation is hazardous. A child will bear the vicissitudes which to a man would be insupportable. The soft and pliant fibres of the former readily yield to impression; those of the latter are more rigid, and are reduced only by violence to recede from the forms they have assumed. We may therefore bring up a child robust and hearty without endangering either its life or health; although even some risk were run in this respect, would not afford sufficient cause of hesitation.

The life of a child becomes the more valuable as he advances in years. To the value of his person, must be added the cost and pains attending his education; to the loss of life, also, may be annexed his own sense and apprehensions of death. We should, therefore, particularly direct our views to the future in his present preservation; we ought to arm him against the evils of youth, before he arrives at that period. For if the value of his age increases, till he attain the age in which it is useful, what a folly is it to protect him from a few evils in his infancy, to multiply his sufferings when he comes to years of discretion!

Man is born to suffer in every stage of his existence. Even self-preservation is attended with some degree of pain. A child as soon as it is born begins to cry; great part of its earliest infancy is spent in tears. Sometimes we dance it about and soothe it; at others threaten and beat it, to make it silent. We always either do that which is pleasing to the child, or exact of it what pleases ourselves; either submitting to its humours, obliging it to submit to ours. There is no medium; it must either command or obey. Hence the first ideas it acquires, are those of tyranny and servitude. Before it can speak, it learns to command, and before it can act, it is taught obedience. It may, sometimes it is punished before it can be conscious of a fault, at least before it can commit one. Thus we early instil into their tender minds the passions which we afterwards impute to nature, and after having taken such pains to make them vicious, complain that we found them so.

In nurseries, the physical part of education is regarded. Provided the child lives, and but *thrive*, as it is called, all is well; nothing more is regarded. But even at this early per-

more regard should be paid than is commonly due to the effects and first impressions, and the acquisition of early habits. We are born with a capacity for acquiring knowledge; but without knowing any thing. The soul, confined in half-formed and imperfect organs, hardly possesses even the *seeds* of its own existence.

The eyes of children are turned constantly toward the light, and, if it come from one side, they imperceptibly take that direction; so that care should always be taken to set them facing the light, lest they should become squint-eyed, or *strabismic* themselves to look crosswise. They should also be early accustomed to the absence of light, otherwise they will be apt to cry when they find themselves in the dark.

Sleep and nutriment, when too exactly proportioned, become necessary to them at the end of stated intervals, and after a time their propensities thence arise, not from physical necessity, but habit; or rather, habit produces an additional necessity to those of nature. This should by all means be guarded against. The only habit in which a child should be indulged, is that of *controlling* none; he should not be permitted to exercise one arm more than the other; we should hardly even accustom him to prefer his right hand *stronger* than his left, or to make use of one more than the other; he should not be used to eat, sleep, or do any thing, at stated hours, or not to be left alone, whether in the day or night. Prepare him early for his enjoyment of liberty, and the exercise of his natural abilities, by leaving him the full possession of them unrestrained by artificial habits, and by putting him in a situation to be always master of himself, and to do whatever his inclination prompts him, as soon as he is able to form one.

As soon as a child begins to distinguish objects, a proper choice should be made in those which are presented to it. Every new object is naturally repelling to a child. It finds itself so weak and feeble, that it is fearful of every thing it is not acquainted with. But familiarity, which renders objects unaffecting, destroys this timidity. Children, educated in elegant houses, where cobwebs are carefully swept away, are always afraid of spiders, and retain the same disgust for them as they grow up. What peasant, either man or woman, was ever afraid of a spider?

In this view, the education of a child evidently begins before it can speak or understand, since from the choice of objects, presented to its view, it is necessary to render it either timid or courageous. They should be habituated then to new objects, in light, disgusting, and uncommon animals; beginning with them, however, at a distance, and letting them approach by degrees; or till, being used to see others handle them, they will venture to handle them themselves. If a child, during his infancy, has been used to regard toads, serpents, or crabs, with indifference, he will look without horror, as he grows up, on any animal whatsoever. No object is frightful to such as are daily accustomed to frightful objects.

Children are naturally terrified at a mask. We should begin to reconcile a child to masks, by showing him first an agreeable one. Somebody

should afterwards put it on, at the sight of which the company should laugh, and the child would then laugh with the rest. By degrees, you should use him to others less agreeable; and lastly, to the most hideous and frightful. He will thus be brought to laugh, and be as much pleased with the last as the first; nor will he ever after be terrified at a mask. Children are seldom afraid of thunder, unless the claps are excessively loud, and really hurt the drum of the ear. They have otherwise no such fear, till they have learned that it is sometimes hurtful and even mortal. The fears thus instilled by reason should be eradicated by habit: while, by slow and artful means, both children and men would acquire intrepidity, and be afraid of nothing.

In a state of infancy, wherein the memory and imagination are as yet inactive, a child is attentive to nothing but what actually affects his senses with pain or pleasure. His sensations being thus the original materials of his ideas, to regulate the formation of those ideas agreeable to the order of things, is to prepare his memory to present them, hereafter, in the same order, to his understanding: but as while so young he is only capable of attending to his sensations, it is sufficient at first, to make him sensible of the connection between these sensations and the objects that excite them. He is curious to touch and handle every thing he sees; he should be indulged in the gratification of this curiosity; it suggests to him a very necessary course of experiments. Hence he learns to feel heat and cold, the hardness, softness, and weight of bodies; to judge of their magnitude, figure, and other sensible qualities, by looking, touching, hearing, and particularly by comparing the sight with the touch, and judging, by the eye, of the sensation acquired by the figures. Care should also be taken at this period to lead the child often out in the open air, or carry him about from place to place, for the benefit of his health by air and exercise.

SECT. II. Of the LANGUAGE of INFANTS.

Infants express the uneasiness occasioned by their wants, by signs, when the assistance of others is required to relieve them. Hence the cries of infants. They are almost perpetually in tears. As all their sensations are of the affecting kind; when these are agreeable, they enjoy them in silence; but, when painful, they naturally express themselves in their *own language*, and demand relief. To this language, we may also add that of gesture, equally expressive. By gesture we do not mean any motion of the feeble hands of such young children; the gesture of infants lies in the muscles of the face. It is astonishing to see such strength of expression in their half-formed physiognomies. Their features are continually varying, with inconceivable rapidity of transition.

As man, in his first stage of life, is a wretched and helpless being, so his first mode of expression is that of *tears* and complaint. An infant is sensible of his wants, and incapable of satisfying them; he therefore implores the assistance of those about him, by his cries. If he be hungry or have thirst, he cries; if too cold or too hot, if he want to move, or to be held still, he cries. If he want

to sleep or to be danced about, he has no other method to express himself but by crying. The less he is in a situation to help himself, the more frequently he requires assistance, to vary his circumstances or position. He has but one kind of language, because he knows, in fact, but one kind of inconvenience. In the present imperfection of his organs, he is incapable of distinguishing their different impressions; all the different causes of his uneasiness form but one sensation of pain.

Thus from the tears of children, which one is apt to think so little worthy of attention, arises the first sense of the relation which man bears to the objects that surround him. Here is forged the first link of that extensive chain which forms the bond of society. When a child cries, it is evidently uneasy; it has some want that requires to be satisfied; we look, we examine what it is, find it out, and relieve it. If this be not the case, and the cause of uneasiness cannot be found, its tears continue to flow, and it begins to grow outrageous. We soothe it, to make it quiet, rock it, or endeavour to sing it asleep. If this does not succeed, we grow impatient and threaten it; nay sometimes a brutal nurse will beat the poor innocent in these circumstances. Strange lessons these, surely, at our first entrance into life!

"I shall never forget," says M. Rousseau, "that I once saw a crying child thus beaten by its nurse; on which it became immediately silent, and, as I thought, intimidated. I reflected upon this occasion, what a servile mind that must be, on which nothing would operate but rigour. I was, however, deceived; the little wretch was almost suffocated with choler; it lost its breath, and I saw it growing black in the face. In a moment after it set up the most piercing cries; expressing all the signs of resentment, fury, and despair, adapted to its age. I was even apprehensive it would expire under the violence of its agitation.—I am very certain, had a burning coal fallen by accident on the hand of the child, it would have been less agitated than by this slight blow, given with manifest intention to hurt it."

This disposition in children to passion, and excessive anger, requires very nice management. We should be careful, therefore, to keep them from servants, who are continually teasing and provoking them. While infants are crossed only by the resistance of *things*, and not by *persons*, they will never grow fractious nor passionate. Tears are the *petitions* of young children; if they be not looked on as such, they will soon become *commands*. Infants would begin by praying our assistance, and then go on to command our service. Thus from their own weakness, whence at first arises the sense of their dependence, follows the notion of domineering and command. This idea, however, is less excited by their wants than by our assiduities; and here we begin to perceive those moral effects, whose immediate cause doth not exist in nature. At the same time, we see how necessary it is, to discover the *secret motives* of the cries of children even in their earliest infancy.

When a child sometimes holds out its hand, without any other emotion, it thinks to reach the object, because it cannot estimate the distance of

it. It is here only mistaken: but when in reaching out its hand, it cries, or manifests other signs of impatience, it is not deceived in the distance the object, but is either commanding it to approach, or you to fetch it. In the first case, the more, it is proper to undeceive the child, by crying it gently toward the object, and in the second not to appear to mind it; but the louder it cries the less notice to take of it. It is of consequence to check children betimes, in usurping the command over persons who are not in their power or over things which they are not sufficiently acquainted with. For the latter reason, it is better when a child desires any thing that may be proper to give him, to carry him to the object, than to bring the object to the child; as, he thus induces a conclusion adapted to his tender years, which there is no other way of suggesting to him.

SECT. III. Of INDULGING and RESTRAINING INFANTS.

One of the greatest difficulties in the education of children seems to be, to know when and how far to indulge, and when to restrain them. That at least appears to be the most difficult task on the part of the parents, and especially of the fond mothers, whose excess of affection leads them often to indulge their children, in all their little follies, till they find it totally out of their power to claim them by proper restraint.

M. Rousseau observes, that "reason teaches us to know good from evil. Conscience which excites us to love the one and hate the other, although independent on the reason, can discover the one from the other without it. But we are capable of reasoning, we do good and without knowing it; and there is no morality in our actions, though there may, and frequently in our sentiments concerning the actions of others relative to us. A child will often put things in disorder, will break every thing it comes near, will grasp a sparrow, as it would a stone, and die, it without knowing what it is doing. The destroying activity of the vital principle is concentrated in the heart of age; in that of infancy it flows and diffuses itself; in the excess of its vivacity, a child seems to have life enough to animate every thing around it. Whether it makes or mends it is all one to a child, provided the situation of things be changed; as every change necessarily implies action. If it seem to have a propensity to destroy things, it is not from a vicious principle; but because the action of breaking things agrees with its natural vivacity."

But while the Author of nature has given children this active principle, he has taken care to prevent its being hurtful, by giving them as little strength in proportion to indulge it. But no father is they misled to conceive the persons about them as instruments which they themselves are put in action, than they make use of them to satisfy their weakness in pursuing their inclination. Hence it is they become importunate, tyrannical, imperious, mischievous, and intractable; a progress that doth not arise from a natural spirit of domineering, but is the effect of wrong education. It requires no great experience to perceive that

agreeable it is to act by means of others, and to have occasion only to speak in order to put the world in motion.

A child, as it grows up, acquires strength, and becomes less active and restless; it contracts its powers more within itself, and nature requires no greater quantity of motion than is necessary to our preservation. But the desire of command does not cease with the motives that gave rise to it; the notion of superiority is flattering to self-love, and is increased by habit: thus caprice succeeds to necessity, and the force of prejudice and opinion takes root in the mind. The principle once known, we are clearly the track wherein we begin to deviate from nature: let us enquire then, what must be done, to prevent our going astray. So far from being endued with superfluous abilities, children have at first hardly sufficient for the purposes nature requires; we may therefore lay down the following maxims as rules:

1. To leave them at full liberty to employ those abilities nature has given them, and which they cannot abuse: 2. To assist them, and supply their deficiencies, whether of body or mind, in every circumstance of physical necessity. 3. Every assistance afforded them should be confined to real utility, without administering any thing to the indulgence of their caprice; for they will never be capricious unless through neglect, or in some particular circumstance depending on their constitution. 4. The meaning of their language and signs ought to be carefully studied, to distinguish, in as early an age as they know not how to dissemble, between those inclinations that arise immediately from nature, and those that are only fantastical.

The design and tendency of these rules are, to give children more real liberty and less command; to leave them more to do of themselves than to require of others. Thus, by being early accustomed to confine their desires to their abilities, they will be little affected with the want of what is out of their power. Here we have a new and very important reason for leaving their body and senses at full liberty; with this precaution, however, that we remove them from the danger of falling down, and put every thing out of their reach whereby they may wound or hurt themselves. It cannot be doubted that an infant, whose body and arms are at liberty, will cry less than another bolstered up in swaddling clothes. The child, who is liable to suffer none but natural inconveniences, will cry only when it feels pain; which is a great advantage in its education; for then we are certain to know when it stands in real want of assistance, and this should be afforded it, if possible, immediately. But if it be out of our power to relieve it, we should take no notice, nor make any fruitless attempt to quiet it: kisses and caresses will not cure its colic; yet will it remember the methods taken to soothe it; and when it ever knows how to employ you at its pleasure, it becomes your master, and all is over.

It is certain, that if we were less ready to be importuned with their tears, it would require less trouble to quiet them; threatened and soothed more seldom, they would become timid and less obstinate, and would retain more of their natural temper and disposition. It is less from letting

children cry unnoticed, than from striving to appease them, that they get falls: a proof of this is, that those who are the most neglected are the least subject to such accidents. We are far, however, from recommending that children should be neglected: on the contrary, so much care must be taken of them as to prevent accidents of this kind, so that their cries shall not give the first notice of them. Neither should a nurse be over solicitous about trifles. Why should she think it so great a hardship on the child, to let it cry a little, when she sees on how many occasions its tears are useful and salutary? When children come to be sensible of the great value set on their silence, they take care you shall not have too much of it.

The long fits of crying in a child, who is neither confined, sick, nor in real want of any thing, are only fits of obstinacy. They are not to be attributed to nature, but to the nurse, who, from not knowing how to bear such importunity, only increases it, without reflecting that, in making the child quiet to-day, she is only encouraging it to cry the more to-morrow. The only way to cure, or prevent this habit, is to take no notice of a child in such circumstances. Nobody cares, not even children, to take fruitless pains. They may for a while persevere in their trials; but if you have more patience than they have obstinacy, they will be disgusted at the experiment, and repeat it no more. This is the method to prevent their tears, and thus to use them to cry only when they are really in pain.

When children are in such fits of caprice and obstinacy, a certain way to quiet them is, to divert their attention by some agreeable and striking object, that may make them forget their motive for crying. Most nurses excel in practising this expedient; and, if artfully managed, it is very useful: but it is of the utmost consequence, that the child should not perceive this intention of diverting him, but that he should imagine we are amusing ourselves without thinking of him: in this respect, however, all nurses are very inexpert, and do a very right thing the wrong way.

SECT. IV. Of the EDUCATION of CHILDREN in the STATE of PUEILITY.

We are now come to the second period of life, at which the state of infancy, properly speaking, ends, and that of PUEILITY begins: for the words *infans* and *puer* are by no means synonymous. The first is comprehended in the other, and signifies a child *who cannot speak*; hence we find, in Valerius Maximus, the expression *puerum infantem*. We shall continue, notwithstanding, to make use of the word *children*, agreeably to its modern acceptance.

When a child begins to talk, it weeps less. This progression is natural; one language being only substituted for another. As soon as he can complain in express terms, why should he do it by tears? If a child be of a delicate constitution, extremely susceptible, and naturally apt to cry for nothing, we should dry up the source of his tears, by rendering them fruitless. So long as he continues crying, no one ought to go near him; but run to him immediately on his becoming silent. His manner of calling us to his assistance would be

then by his silence, or, at most, by giving only one cry. It is from the perceptible effect of signs, that children judge of their meaning; they see no other relation between them. Whatever mischief a child may have done to itself, it is very rare for it to cry, when alone, at least if it has no hopes of being heard.

If a child get a fall, a bump on his forehead, make his nose bleed, or cut his fingers; instead of running to him with an air of apprehension, we should remain quite still, at least for some time. The mischief is done, and there is a necessity for his bearing the pain of it; our over-solicitude would only serve to frighten him the more, and increase his sensibility. In fact, it is less the pain than the fright, which affects children on these occasions. We should spare him, at least, the anxiety of the latter; for he will certainly judge of his misfortune in a great degree as we do. If he sees us alarmed, run eagerly to his relief, console and pity him, he will think himself undone: but if he sees us apparently indifferent, and make light of it, he will soon make as light of it himself, and think himself cured as soon as the smart is over. It is at this age children acquire their *first principles of courage*; and, by being injured to slight inconveniences, learn by degrees to support greater.

Indeed, so far from being anxious to prevent a child from cutting or hurting himself, it is better that this should sometimes happen; and that he should not grow up without feeling pain. The first thing we ought to learn, and that which is of the greatest consequence for us to know, is to suffer. It seems as if children were formed little and feeble only to learn this important lesson without danger. If they fall down, or run against any thing, they neither break a leg nor an arm: if they wound themselves with any sharp instrument, the wound is hardly ever fatal, or very deep. We know, in short, scarcely any instance of a child, when left at liberty, having killed, maimed, or done itself any considerable damage; unless, indeed, where it has been imprudently exposed to tumble down from some high place, to fall into the fire, or water or within the reach of some deadly weapon. Instead therefore, of keeping him in the close air of his nursery, he should be taken out every day into the open fields. There he might run and play about; and if he tumbles a hundred times a day, so much the better; he will the sooner learn, when down, to get up again. The pleasure of being at liberty will be a sufficient recompense for his falls.

When children, by the developement of their corporeal powers, are capable of doing more themselves, they have less need of recurring frequently to others. With the increase of their strength, increases also their knowledge in the means of exerting it. It is at this period the life of the individual may be properly said to commence; it is at this time he begins to be conscious of himself. His memory extends the sense of his identity to every moment of his existence; he becomes conscious of being always one and the same person, and of course already susceptible of happiness or misery. The reflections of M. Rousseau, upon the bad effects of too much restraint upon children at

this happy period of life, breathe such a spirit of humanity that we cannot help quoting them *verbatim*. Though perhaps not quite applicable to practice, in their utmost extent, they may at least serve as a caution to parents, especially those of passionate tempers, to beware of exercising too much severity upon their children, lest in case of their death they lay up *sorrow in store* for themselves.

"Although the longest term of human life (says he) is determinate, and it be easy to calculate the probability of our reaching that term at any intermediate age, yet nothing is more uncertain than the duration of life in the persons of individuals; very few of whom arrive at its longest period. Life is the most precarious at its commencement; the less time we have existed, the less hope we have of future existence. Of all the children that are born, the half only, at most, arrive at the age of 14, and it is very probable you may not reach the age of manhood.

"What can we think, then, of that barbarous method of education, by which the present is sacrificed to an uncertain future: by which a child is laid under every kind of restraint, and is made miserable, by way of preparing him for we know not what pretended happiness, which there is reason to believe he may never live to enjoy? Supposing it not unreasonable in its design, how can we see without indignation, the unhappy innocents subjected to a yoke of insupportable rigour, and condemned like galleys slaves to continual labour, without being assured that such mortifications and restrictions will ever be of any service to them? The age of cheerfulness and gaiety is spent in the midst of tears, punishments, threats, and slavery. We torment the poor creatures, for their *future* good, and perceive not that death is at hand, and ready to seize them amidst all this sorrowful preparation for life. Who can tell how many children have fallen victims to the extravagant sagacity of their parents and guardians! Happy to escape such cruelty, the only advantage the poor sufferers reaped from the evils they endured, being to die without regretting a life of misery.

"Man! be humane! It is the first, the chief of moral duties, to exercise humanity to every thing, of what age and condition soever, that is relative to man. What is wisdom void of humanity? Have a tender regard for children, indulge them in their diversions, their pleasures, and in every thing dictated by their harmless natures.

"Who is there among us, that has not, at times looked back with regret on that period of our lives, wherein the countenance was always smiling, and the heart as constantly at ease? Who will you deprive the little innocents of the enjoyment of a season so short and transient? of a blessing so precious, which they cannot abuse? Who will you clog, with bitterness and sorrow, those rapid moments which will return no more to them than you? Ye fathers! Do you know where the stroke of death shall fall upon your offspring? Lay not up in store, then, for your own sorrow by depriving them of the enjoyment of the few moments nature has allotted them; as soon as they become sensible of the pleasures of existence

let them enjoy it, so that, whenever it may please God to call them home, they may not die, without having tasted of life.

"What exclamations are here raised! How loud the clamours of that mistaken wisdom, which leads us perpetually out of ourselves; which regards the present always as *nothing*, and incessantly pursuing a future that *recedes as we advance*, by taking us from the spot we are in, transports us where we shall never be! This is the time, you will perhaps reply, to correct the propensities of human nature. It is its infancy, you will say, when our pains are least violent, that they should be multiplied, in order to diminish their number when we arrive at the years of discretion. But who hath told you, that such will be the consequence, or that such an arrangement of cause and effect is in his power? Or that all the fine discipline, in which you train the weak mind of an infant, will not be one day more pernicious than useful? Who hath assured you, that you shall save him any pain or trouble hereafter, by what you inflict on him now? And how will you prove to us, that those evil propensities which you pretend to eradicate, are not owing to your own mistaken behaviour, much more than to nature? At all events, that cannot but be an unlucky foresight, which makes us for the present miserable, under the notion, whether well or ill founded, of rendering us *one day or other happy*. Hence let those who usually confound liberty and licentiousness, and make no difference between a child that is *spoiled* and one that is *made happy*, learn to make a distinction.

"To prevent our running into chimeras, let us never lose sight of what is befitting our situation. Humanity has its place in the order and constitution of things: the state of infancy in those of human life; men should be considered as men, and children as children. To assign both their separate places, and regulate the human passions, according to the constitution of man, are all that can be done for his happiness. The rest depends on circumstances which are not in our power.

"He only performs the actions of his own will, who stands in no need of the assistance of others, to put his designs in execution: and hence it follows, that the greatest of all blessings is not authority, but liberty. A man, truly free, will only what he is able to perform, and performs what he pleases. This should be a fundamental maxim. It need only be applied to a state of infancy, and all the rules of education will naturally flow from it.

"Society has enervated man, not only by depriving him of the privilege of exerting his natural faculties, but particularly in rendering them inefficient for his purposes. Hence it is that his desires are increased with his weakness; and hence also we may see what is the weakness of a child compared with that of a man. If man is a powerful being, and a child is a feeble being, it is not because the former has more absolute strength than the latter, but because he is naturally capable of supplying his own wants, and the other is not. Men, therefore, should be more resolute, and children more capricious; by which we mean, the latter should have a greater number of desires that do

not arise from real wants, and cannot be gratified without the assistance of others.

"We have given a reason for the weakness of a state of infancy. Nature hath provided for it, in the attachment of parents to their offspring. This attachment, however, may be carried to excess, and is subject to great abuse. Parents who live themselves in a civilized state, introduce their children into the world too young. By increasing the number of their wants, instead of relieving, they augment the natural weakness of infancy. They augment it farther, in requiring more of a child than is required by nature; in subjecting to the will of the parent, the little strength a child has to execute its own; and in converting into servility, on both sides, the reciprocal dependence adapted to the weakness of the one, and the attachment of the other.

"A wife man knows and will keep his place; but a child is ignorant of *his*, and therefore cannot confine himself to it. There are a thousand avenues through which he will be apt to escape: it belongs to those who have the care of his education, therefore, to prevent him; a task, by the way, which is not very easy. He should be neither treated as an irrational animal, nor as a man; but simply as a *child*: he should be made sensible of his weakness, but not abandoned to suffer by it; he should be taught dependence, and not merely obedience; he should be instructed to *ask*, and not to *command*. He is in a state of submission to others, only because of his wants, and because they know better than himself what is good or hurtful for him. No one hath a right, not even the *father* of a child, to *command it to do any thing that is useless*.

"Before prejudice and custom have altered our natural dispositions, the happiness of children, as well as of men, consists in the exercise of their liberty; but this liberty in the first is limited by their weakness. Whosoever does what he will is happy, provided he is capable of doing it himself. This is the case with man in a state of nature. But though a man act as he pleases, yet if his desires surpass his personal abilities, he is not happy. This is the case with children in the same state. They enjoy, even in that of nature, but an imperfect liberty, resembling that which men enjoy in a state of civil society. As we all stand in need of each other, we become by that means weak and miserable. Nature intended us to be men; the laws and customs of society have reduced us to the condition of children. The rich, the great, the powerful, are all mere infants, who, seeing every one solicitous to relieve their misery, deduce from thence the most puerile vanity, and are proud of that service and attendance, which would not be paid them if they were completely *men*.

"These considerations are of great importance, and may serve to account for all the contradictions we meet with in the social system. Man is subjected by two kinds of dependence; the first on circumstances and things, which is that of nature; and the second on men, which is the effect of society. The former being merely physical, is in no degree destructive of liberty, nor productive of

of guilt: the latter, being unnatural and disorderly, is productive of all manner of vice, and it is by means of this the master and the slave mutually corrupt each other. If there be any way to remedy this evil in society, it is by substituting laws in the place of persons, and to invest the general will with a real power, superior to that of individuals.

"If the laws of nations, like those of nature, were so fixed and invariable, as that no human force or art could alter them, our dependence on men would then become the same as that on circumstances; we might unite, in a republican government, all the advantages of a state of nature with those of society; to that liberty which preserves man from falling into vice, we might add that morality which raises him up to virtue. But this is not the case. Subject your child, therefore, only to a dependence on *circumstances*; you will then follow the order of nature in the progress of his education. Oppose to his indiscreet desires only *physical obstacles*, or the *inconveniences naturally arising from the actions themselves*; these he will remember on a future occasion: without forbidding him to do ill, it is sufficient to prevent him. Experience and impotence only should lay on him their positive commands. Give him nothing because he *desires it*, but because it is *needful for him*. Let him not know, that in doing your will he is obedient to you, nor that in doing his you are subservient to him. Infil no ideas of command or obedience, but let him conceive both your actions and his own to be equally independent. Assist him when he stands in need of it, just so much as is necessary to make him free, but not imperious; thus, in receiving that assistance with a kind of humiliation, he will aspire after that moment when he shall be able to do without it, and have the honour to serve himself.

"In order to strengthen, and forward the body in its growth, nature employs various means, which should never be thwarted. We should never, for instance, oblige a child to stand still, when it is desirous of running about; nor to walk about when it is propense to stand still. If the disposition of children is not spoiled by our own fault, they will never require any thing that is useless. Let them leap, run about, and make what noise they please. This is all the natural effect of the activity of their constitution, exerting itself to gather strength; but we ought to distrust every desire which they are incapable of themselves to gratify, and for which they are obliged to request our assistance. We should be very careful here to distinguish between the true, the physical want, and that of caprice, which now begins to shew itself, or that which arises only from the superfluity before mentioned."

Amidst that singularity and eccentricity which appears in some of the above extracts, and which more or less characterise all the writings of this great genius, we must allow there are many remarks well worthy of the attention of parents. But the following judicious observations of Mr HERON, upon this part of our subject, inserted in the last edition of the *Encyclopædia Britannica*, are evidently more applicable to general practice in the present state of society.

"Man is naturally an imitative animal. Scarcely any of our natural dispositions is displayed at an earlier period than our disposition to imitation. Children's first amusements are dramatic performances, imitative of the arts and actions of men. This is one proof among others, that even in infancy our reasoning faculties begin to display themselves; for we cannot agree with some philosophers, that children are actuated and guided solely by instinct in their attempts at imitation.

"However that be, the happiest use might be made of this principle, which discovers itself so early in the infant mind. Whatever you wish the child to acquire, do in his presence in such a manner as to tempt him to imitate you. Thus, without sousing his mind by restraint during this glib innocent period of life, you may begin even now to cultivate his natural powers. Were it impossible at this time to communicate any instruction to the boy, without banishing that sprightly gaiety which naturally distinguishes this happy age, it would be best to think only how he might pass his time in the least disadvantageous manner. But this is far from being necessary. Even now this little creature is disposed to imitation, is capable of emulation, and feels a desire to please the whose kindness has gained his affection. Even now his sentiments and conduct may be influenced by rewards when prudently bestowed, and by punishments when judiciously inflicted. Why then should we hesitate to govern him by the best principles, by which the laws of God and society assert their influence on our own sentiments and conduct? Indeed, the imprudent manner in which children are too generally managed at this early period, would almost tempt us to think it impossible to instruct them, as yet, without injuring both their abilities and dispositions. But this, owing solely to the carelessness, stupidity, or expensive conduct of those under whose care they are placed.

"Is implicit obedience to be exacted of children? and at what period of life should we be to enforce it? As children appear to be capable both of reasoning and of moral distinctions at a very early age; and as they are so weak, so inexperienced, so ignorant of the powers of surrounding bodies, and of the language, institutions, and arts of men, as to be incapable of supporting conducting themselves without direction or assistance; it seems therefore proper that they be required even to submit to authority. To the necessity of nature both they and we must on many occasions submit. But if the will of a parent or tutor be always found scarce less unalterable than the necessity of nature, it will always meet with the same respectful submissive resignation. It is not perhaps be always proper to explain to children the reasons for which we require their obedience: because, as the range of their ideas is much less extensive than ours; as they do not well understand our language, or comprehend modes of reasoning; and as they are now and then under the influence of passion and caprice, as are people who are farther advanced in life; are therefore likely to fail in making them comprehend our reasons, or in convincing them that they are well grounded. And as it is proper

read obedience of children; so we should begin to require it as soon as they become capable of any considerable degree of activity. Yet we must not confine them like slaves, without allowing them to speak, to look, or to move, but as we give the word. By such treatment we could expect only to render them peevish and capricious. It will be enough, at first, if we let them know that obedience is to be exacted; and if we restrain them only where, if left at liberty, they would be exposed to imminent danger.

"If then, at so early a time of life as before the age of five or six, it is possible to render children obedient and to communicate to them instruction; what arts, or what learning, ought we to teach them at that period? To give a proper answer to this question, is no easy matter. It seems at first difficult to determine, whether we ought yet to initiate them in letters. But as their apprehension is now quick, and their memory pretty retentive, there can not be a more favourable time for this very purpose. As soon as they are capable of a distinct articulation, and seem to possess any power of attention, we may with the greatest propriety begin to teach them the alphabet. The most artful, alluring methods may be adopted to render the horn book agreeable; or we may use the voice of authority, and command attention for a few minutes; but no harshness, no severity, and hence any restraint. At the same time, it will be proper to allow the little creatures to run much about in the open air, to exercise their limbs, and to cultivate those social dispositions which already begin to appear, by playing with their equals.

"Such are the thoughts which have suggested themselves to us concerning the management of children in infancy," and puerility. "What an amiable little creature would the boy or girl be, who were brought up in a manner not inconsistent with the spirit of these few hints? Behold him healthy and vigorous, mild, sprightly, and cheerful: He is submissive and docile, yet not dull or stupid; he appears capable of love, of pity, and of gratitude. His mind is hitherto, however, almost wholly unformed: he is acquainted but with a few of the objects around him; and knows but little of the language, manners, and institutions of men: but he feels the impulse of an ardent curiosity, and all the powers of his mind are alive and active."

SECT. V. *Of the EDUCATION of CHILDREN between FIVE and TEN YEARS of AGE.*

Five years of age appears to be the proper period, though with children of a quick capacity a shorter period may be proper,) when the parent or tutor, should enter upon the

"Delightful task! To rear the tender thought,
"To teach the young idea how to shoot."

THOMSON.

to render it a task truly delightful, it should be made every way as agreeable as possible to the pupil as well as to the instructor.

We agree with Mr Heron, however, that "at this period it may be proper, not only to exact obedience, and to call the child's attention for a few minutes now and then to those things, of which the knowledge is likely to be afterwards

useful to him; but we may now venture to require of him a regular steady application, during a certain portion of his time, to such things as we wish him to learn. Before this time it would have been wrong to confine his attention to any particular task. The attempt could have produced no other effect than to destroy his natural gaiety and cheerfulness, to blunt the native quickness of his powers of apprehension, and to render hateful that which you wished him to acquire. Now, however, the case is somewhat different: The child is not yet sensible of the advantages which he may derive from learning to read, for instance; or even though he were able to foresee all the advantages which he will obtain by skill in the art of reading through the course of life; yet is it the character of human nature, at every stage of life, to be so much influenced by present objects in preference to future views, that the sense of its utility alone would not be sufficient to induce him to apply to it. Even at the age of 12, of 20, of 50; nay, in extreme old age, when reason is become very perspicacious, and the passions are mortified; still we are unable to regulate our conduct solely by views of utility. Nothing could be more absurd, therefore, than to permit the child to spend his time in foolish tricks, or in idleness, till views of utility should prompt him to spend it in a different manner. No: let us begin early to habituate him to application and to the industrious exertion of his powers. By enduing him with powers of activity and apprehension, and rendering him capable of pursuing with a steady eye those objects which attract his desires, nature plainly points out to us in what manner we ought to cultivate his earlier years. Besides, we can command his obedience, we can awaken his curiosity, we can rouse his emulation, we can gain his affection, we can call forth his natural disposition to imitation, and we can influence his mind by the hope of reward and the fear of punishment. When we have so many means of establishing our authority over the mind of the boy without tyranny or usurpation; it cannot surely be difficult, if we are capable of any moderation and prudence, to cultivate his powers by making him begin at this period to give regular application to something that may afterwards be useful.

"And if the boy must now begin to dedicate some portion of his time regularly to a certain task, what task will be most suitable? Even that to which children are usually first required to apply; continue teaching him to read. Be not afraid that his abilities will suffer from an attention to books at so early an age. Say not that it is folly to teach him words before he have gained a knowledge of things. It is necessary, it is the design of nature, that he should be employed in acquiring a knowledge of things, and gaining an acquaintance with the vocal and written signs by which we denote them, at the same time. These are intimately connected; the one leads to the other. When you view any object, you attempt to give it a name, or seek to learn the name by which men have agreed to distinguish it: in the same manner, when the names of substances or of qualities are communicated to us, we are desirous of knowing what they signify. At the same time,

so imperfect is the knowledge of nature which children can acquire from their own unassisted observation, that they must have frequent recourse to our assistance, before they can form any distinct notions of those objects and scenes which they behold. Indeed language cannot be taught, without teaching that it is merely a system of signs, and explaining what each particular sign is designed to signify. If, therefore, language is not only necessary for facilitating the mutual intercourse of men, but is even useful for enabling us to obtain some knowledge of external nature, and if the knowledge of language has a natural tendency to advance our knowledge of things; to acquaint ourselves with it must therefore be regarded as an object of the highest importance: it must also be regarded as one of the first objects to which we ought to direct the attention of children. But the very same reasons, which prove the propriety of making children acquainted with those artificial vocal signs which we use to express our ideas of things, prove also the propriety of teaching them those other signs by which we express these in writing. It is possible indeed, nay it frequently happens, that we attempt to instruct children in language in so improper a manner as to confound their notions of things, and to prevent their intellectual powers from making that improvement of which they are naturally capable: but it is also possible to initiate them in the art of reading, and in the knowledge of language, with better auspices and happier effects. The knowledge of language may be considered as the key by which we obtain access to all the stores of natural and moral knowledge.

"Though we now agree to confine our pupil to a certain task, and have determined that his first task shall be to learn to read; yet we do not mean to require that he be confined to this task during the greatest part of the day, or that his attention be seriously directed to no other object. To subject him to too severe restraint would produce the most unfavourable effects on his genius, his temper, and his dispositions. It is in consequence of the injudicious management of children, while they are sometimes suffered to run riot, and at other times cruelly confined like prisoners or slaves; it is in consequence of this, that we behold so many instances of peevishness, caprice, and invincible aversion to all serious application at this period of life. But were a due medium observed, were restraint duly tempered with liberty and indulgence, nothing would be more easy than to dispose children to cheerful obedience, and to communicate to them instruction at this age. That part of their time which they are left to enjoy at liberty, they naturally dedicate to their little sports. The favourite sports of boys are generally active; those of girls, sedentary. Of each we may take advantage, to prepare them for the future employments of life. However, neither are the amusements of boys invariably active, nor those of girls always sedentary; for, as yet, the manners and dispositions of the two sexes are distinguished rather by habit or accident than by nature. The disposition to activity which characterizes children, is no less favourable to health than to their improvement in knowledge and prudence; their

active sports have a tendency to promote their growth and add new vigour to their limbs. Perhaps, even at this time, children might be enticed to learn the elements of natural philosophy and natural history amid their amusements and sports. Birds, butterflies, dogs, and other animals, are now favourite objects of their care; their curiosity is powerfully roused by the appearance of any strange object; and many of the simplest experiments of natural philosophy are so pleasing, that they cannot fail to attract the attention even of those who are least under the influence of curiosity. Yet it would be improper to insist on their attention to these things as a task: if we can make them regard them as amusements, it will be well. If not, we must defer them to some happier season. They might also, by proper management, be led to acquire some skill in the arts. They build mimic houses, and fill them with suitable furniture; they construct little boats, and sail them; they will fence in little gardens, and cultivate them; and we even see them imitate all the labours of the husbandman. Such is the pleasure which man naturally feels in exerting his power and in acting with design. Let us encourage this disposition. These are the most suitable amusements in which they can engage.

"As the boy's attention to literary objects is still supposed to be continued, he will soon be led to read with some correctness and facility. It becomes an object of importance, and of no small difficulty, to determine what books are to be put into his hands, and in what manner his literary education is to be conducted. After the child is made acquainted with the names and powers of the letters, with their combination into syllables and with the combination of these again in words, so that he can read with tolerable facility, it will be proper that the pieces of reading which are put into his hands be such as are descriptive of the actions of men, of the scenes of external nature, and of the forms and characters of animals. With these he is already in some degree acquainted: these are the objects of his daily attention; beyond them the range of his ideas do not yet extend; and therefore other subjects will be likely to render his task disagreeable to him. Besides, our present object is to teach him words in order to teach him words, we must let him know their signification; but till he have acquired a very considerable knowledge of language, till he have gained a rich fund of simple ideas, it will be impossible for him to read or to hear with understanding on any other subject but these. And as we are not as yet particularly anxious to communicate to him religious or moral instruction, of course we must act in such a manner as we think most proper. Our great business at present is, to make him acquainted with our language, and to teach him in what manner we use it to express our ideas. By his own observation, and by our instruction, he will soon become capable of comprehending that we wish to communicate: But let us not be too hasty; the boy cannot long view the actions of mankind, and observe the economy of the animal and the vegetable world, without becoming capable of receiving both religious and moral

friction: when judiciously communicated." We differ widely from M. Rousseau, however, who proposes that we should "bring up our pupil healthy and robust to the age of *twelve* years, without his being able to distinguish his right hand from his left!"—So afraid is M. Rousseau of the bad effects of *early prejudices*, that he is for bringing up his pupil more ignorant than a savage, rather than he should imbibe a single erroneous one. "Exercise his corporeal organs, senses, and faculties," adds he, "but *keep his intellectual ones inactive as long as possible.*" This advice is neither prudent nor practicable. Were it possible to keep the human intellect so long in a state of inaction, until 12 years of age, we fear the pupil, instead of becoming, as M. Rousseau expects, "the *wisest of men*," would turn out little better than an idiot all his life after. We may just as well say, that to make a boy a most expert tumbler or dancer, we ought to bind up his limbs till 12 years of age, lest by using them too early he should become *lame* or *bow-legged*. It is an undoubted fact, that the intellectual powers begin to expand at a very early period. The duty of parents therefore is, from as "the *young idea* begins to *shoot*," is to give it a proper direction; else we may be certain, that it will take a wrong one, and, like plants, in an uncultivated garden, be soon choked with weeds. We may here oppose to M. Rousseau's theory, the practice of the celebrated Dr Beattie, who began to instruct his son in the first principles of religion at so early a period as five or six years of age; and his method was attended with the most happy effects. See BEATTIE, § 1.

At this period, too, it will be proper to begin to give the child some ideas of the moral duties which are due to each other. "The first and most obvious lesson of morality," says Dr Chapman, is "Not to do ill; not to give pain to another." This is a lesson which cannot be too frequently inculcated upon children. This is the safest rule for their conduct, and the surest test of their virtue. To this the precept of doing good is but subordinate. This aversion from doing ill, when it is rooted in the mind, will accustom children to exercise the understanding in distinguishing between right and wrong; it will check the violence of their passions; it will teach them, if not the most useful, yet the most useful virtues in life, *modesty, justice, and prudence.*"

About this period too it will be proper to give them some cautions respecting the effects of the passions, and guard him against all violent outbursts of those which children are most ready to give to. Upon this subject, M. Rousseau has much worth quoting, although it is by no means inexpressible.

"Violent passions produce a great effect on a child who is witness of them, because their effects are striking, and command attention. A particular is so boisterous in its expression, that it is impossible not to perceive it near at hand. You will ask, perhaps, how does not afford a fine opportunity for the parent to make an excellent discourse? No excellent discourse at all; not a word should be said on the occasion. Let the child only be a witness to the scene; he will be too much

surprised at the sight not to ask you the meaning of it. Your answer is very simple, and naturally arises from the very objects that strike his senses. He sees an inflamed countenance, sparkling eyes, menacing gestures; he hears violent exclamations; all signs that the body is out of order. Tell him, therefore, seriously, and without appearance of affectation, the poor man is taken suddenly ill; that he is seized with a fit of an ague. You may hence take occasion to give him, in a few words, a general notion of diseases and their effects: for these depend immediately on nature, and form one of those chains by which he should perceive himself bound to the immovable weight of necessity.

"Is it not probable, that from this notion, which is far from being a false one, he may contract an early repugnance to all excess of passion, which he would regard as a distemper? Do not you think, at least, that such a notion, properly inculcated, might produce as salutary an effect as a tedious moral sermon? The future advantages attached to this notion also are not inconsiderable; as you are thereby authorized, if there should be occasion for it, to treat a fractious child as if he were sick; to confine him to his chamber, or even to his bed, if needful, and to prescribe him a strict regimen; by which means he will become afraid of these growing vices, and will look upon them as odious and formidable; without ever regarding the severity you are obliged to make use of, in order to cure him of them, in the light of a punishment. Should it so happen, also, that you yourself, in some unguarded moment, should depart from that temperance and moderation which it should be your constant study to maintain, you need not seek to disguise your error; but apologize, for such folly of your passion, by frankly telling him, with a tender reproach, that he hath made you very ill.

"It is further to be observed, as a matter of great consequence, that none of those simple and ingenuous expressions, which may give a child an idea of the ignorance in which he is educated, should be taken notice of and repeated in his hearing. An indiscreet fit of laughter in a bystander might disconcert all that you had been doing for six months, and do him an irreparable injury perhaps all his life-time. We cannot be too often reminded, that to be master of a child, it is necessary to be master of one's self. If your pupil happen to be present at a scolding bout between two female neighbours, and, going up to the most violent, he says to her, in a tone of compassion: *Good woman you are extremely ill; I am very sorry for it*; this instance of simplicity would undoubtedly have its effect on the spectators, if not on the actresses themselves. Without either smiling, chiding, or commending him, however, it would be requisite to take him instantly away, before he perceives that effect, at least before he can have time to reflect on it; and, by diverting his mind to other objects, soon drive it entirely out of his thoughts."

All this is very pretty in theory, but like many other parts of this philosopher's plan of education, it is not practicable. The child will very soon

discover the difference between the passions of the mind, and the diseases of the body; and the worst of it is, he will no sooner discover this, than he will discover along with it, that his parent or tutor has been deceiving him: Hence he will infer, that they are not always to be believed in what they tell him, and that there is no harm in telling a falsehood to serve a purpose. M. Rousseau himself is elsewhere pretty severe upon lying; yet here he recommends it to the parent or preceptor, to carry on a series of falsehood for a considerable time, and to carry off his pupil the moment he has any chance of detecting the deception. That system of education, which authorises by precept or example the smallest deviation from truth, is erroneous, whatever beauties it may possess in other respects. Nothing ought to be earlier, or more strongly impressed upon the minds of children, than the necessity of a strict adherence to truth upon all occasions. This may be easily done, not by teaching them, that "they must not tell a *fib*, because it is *naughty*,"—a reason, which leads to a circuitous mode of reasoning, which Rousseau has with no small humour elsewhere ridiculed: but by telling them that a person who is known to tell falsehoods loses all credit, and is not believed even when he tells truth. This may be illustrated to a very young child, by the well known fable of the Shepherd's Boy, who lost his sheep in consequence of his having repeatedly given false alarms.

And here we cannot help taking notice of a very general error—(or rather we may say *crime*;) committed in the education of most children, by mothers, grand mothers, nurses, servants, and almost all others about them, who, upon every trivial occasion impose upon their ingenuous credulity, by telling them the most gross and palpable falsehoods. There is not indeed a more common, or perhaps a more dangerous blunder than this, in the management and education of children. It is attended with various bad consequences. It undermines the first principles of virtue. The child, as soon as it begins to exercise its ideas, upon the objects around it, finds it has been told many falsehoods. Hence it begins to suspect falsehood in every thing, and the lessons it afterwards receives from its parents and teachers against lying come rather too late. We will not here enter upon the question, Whether the human heart is *naturally good*, as the modern philosophers tell us, or *naturally evil*, as most theologians teach us, or whether it is a mere *tabula rasa*—like a sheet of clean paper, capable of either being blotted, or of having fair characters wrote upon it; but we will venture to affirm, that if there is any one virtue *natural* to it, it is that of *ingenuity*, and a readiness to believe whatever is told to it. No child, that ever we have heard, read, or had any experience of, ever showed a natural inclination to be *suspicious*. How cruel, then, is it to impose upon this first principle of all virtue in children,—this ingenuous readiness to believe whatever they are told, by telling them falsehoods from their very birth upwards? It is thus that we teach them falsehood and deceit, and then blame them when we find them afterwards attempting to deceive us. This early and almost universal error in the very first

training up of children from the very breast, we are persuaded, at least as much, if not more the cause, of that inclination to lying and deceit which they afterwards too often discover, than the cause assigned by M. Rousseau, viz. the fear of *reproach* or *punishment*. The example of a mother, nurse, or servant, is often followed by children in telling lies to each other for mere amusement, where there is no dread of either punishment or reproach.

SECT. VI Of ARTIFICE and CUNNING in CHILDREN; and of EXCESSIVE INDULGENCE of them

Upon this important part of our subject, I shall again quote the sentiments of M. Rousseau as containing some very just observations; though we are far from thinking his plan of education in general, either the best or most practicable, though has been published.

"Having already advised (says he) what is to be done when a child cries for this thing or that other, to this we will only add, that, when it is capable of expressing itself in words, if it endeavours to enforce its demands by crying, in order to obtain its wants more speedily, or to overcome a refusal, it ought to be absolutely and *irrevocably denied*. When it desires what is necessary, you ought to know and immediately comply with its request: but to be induced to do any thing by its *tears*, is to encourage it to *cry*; it is to teach it to doubt your good will, and to think you are influenced more by impotency than benevolence. Beware of this; for if your child once comes to imagine you are not of a good disposition, he will soon be of a bad one; if he once thinks you cannot please him, he will soon grow obstinate. You must comply with his request immediately, if you do not intend to refuse it. Mortify him not with frequent *denials*, but never *revoke a refusal once made*.

"But, above all things, beware of teaching your child the ceremonious jargon of politeness, a set of phrases which he employs, like magic formulas, to subject to his pleasure every one that comes near him, and to obtain upon demand whatever he desires. In the mode of education adopted by the rich, their children never fail being rendered *politely imperious*, by being instructed to make use of such expressions as nobody chooses to resist. Neither in voice nor manner have they any thing *suppliant* about them: on the contrary, they are as arrogant, if not more so than their requests, than in their commands, inasmuch as they are always more certain of being obeyed. One sees immediately, that their *If you please*, means, *It is I please*; and that their *pray for do*. Admirable politeness this, which teaches them only to pervert the meaning of words, and not to be able to speak otherwise than with an air of command! Surely it is a less evil that a child should prove clownish than insolent, and we much rather hear him say in a suppliant tone, *so or so*, than make use of a dictatorial *Pray you please*. It is not the words he makes use of that are of so much consequence, but the action he annexes to them.

"Excessive severity, as well as excessive indulgence, should be equally avoided. If you

children to suffer, you expose their health, endanger their lives, and make them actually miserable; on the other hand, if you are too anxious to prevent their being sensible of any kind of pain and inconvenience, you only pave their way to feel much greater; you enervate their constitutions, make them tender and effeminate; in a word, you remove them out of their situation as men, into which they must hereafter return in spite of all your solicitude. In order not to expose them to the few evils nature would inflict on them, you provide for them many which they would otherwise never have suffered.

It may here perhaps be objected, that we fall into the same error, for which we have reproached those mistaken parents, who sacrifice the present happiness of their children to the consideration of an uncertain or imaginary futurity. Not so; for our pupils will be sufficiently indemnified for the slight inconveniences they suffer, by the liberty in which they are indulged. The neglected little rogues will be seen sometimes playing amidst the snow with their hands black and blue, and to be numbed as hardly to be able to move their fingers. They may go, if they will, to the fire and warm themselves; yet this they refuse to do; and, if you should compel them to it, they would suffer an hundred times more from your severity than from that of the cold. Of what then do you complain? Do we make the child unhappy by exposing him only to those inconveniences he chooses to suffer? No. We make him happy for the present, by leaving him to enjoy his liberty; and prepare him for being so hereafter, by arming him against those evils he must necessarily encounter. If it depended on his choice to be our pupil or yours, do you think he would hesitate a moment which to prefer?

“Do you conceive any being can be truly happy in circumstances inconsistent with its constitution? And is it not inconsistent with the constitution of man, to endeavour to exempt him from all the evils incident to his species? It is a fact, that we are capacitated to experience great pleasure, only by being inured to slight pain; for such is the nature of man. If his physical constitution be too vigorous, his moral constitution tends to degeneracy. The man who should be ignorant of pain, would be a stranger also to the sensations of humanity, and the tender feelings of compassion for his species; his heart would be unsusceptible of sympathy; he would be unsocial; he would be a monster among his fellow creatures.

“Would you know the most infallible way to make your child miserable? It is to accustom him to obtain every thing he desires: for, those desires will increase from the facility of gratification, your incapacity to satisfy them must sooner or later reduce you to the necessity of a refusal; and that refusal, so new and uncommon, will give him more trouble than even the want of that which he desires. From wanting your cane he will proceed to your watch; he will next want the bird that flies in the air, the star that glitters in the firmament; in short, every thing he sees: nothing less than omnipotence would enable you to satisfy it.

“It is natural to man to regard every thing as

his own, which he has in his power. Could we increase with our desire the means of gratifying them, every one would conceive himself the lord over all. The child, therefore, who needs only desire a thing to obtain it, is led naturally to imagine himself the proprietor of the universe; he looks upon all mankind as his slaves; and when any thing is, at length, refused him, he, who conceives not the impossibility of executing any of his commands, esteems such refusal as an act of rebellion: all the reasons that can be given him at an age incapable of reasoning, appear to him only pretexts. He sees your ill-will through the whole: the sense of an imaginary injustice sours his disposition; he begins to hate every body; and, without ever thinking himself obliged by their complaisance, is enraged at their contradiction. How is it possible that children, thus subjected to be made the prey of the most irascible passions, can ever be happy? Their desires, irritated by the facility with which they have usually been gratified, are bent on impossibilities, whilst they meet on every side with nothing but contradictions, obstacles, sufferings, and sorrow. Always grumbling, fractious, and passionate, they pass their time amidst perpetual tears and complaints. How can these be supposed happy in their situation? Imbecility and authority united, generate only folly and misery. But if these notions of tyranny and command make men miserable in their infancy, how much more will they do so as they grow up, when the relations they stand in to others become more numerous and extensive! Accustomed to see every thing give way to their desires, how will they be surprised, in entering on the world, to see every thing resist their will, and to find themselves oppressed by the weight of that universe, which they imagined they could move about at pleasure!

“If we consider the state of childhood in itself, is there in the world a more feeble and helpless being, more exposed to the mercy of every thing about it, that bath more need of pity, assistance, and protection, than an infant? Do not even its innocent looks and engaging figure seem peculiarly calculated to interest in its favour all that approach it, and to induce them to succour its weakness? What then is more disgusting, and contrary to the nature of things, than to see a child imperious and refractory, commanding every one that comes near it, and impudently usurping the tone of a master over those who have only to leave it, and it must perish?

“On the other hand, who must not see that a child lies under so many restrictions on account of its natural weakness, as to acknowledge it barbarous to add to this restraint that of our caprices, in depriving it of so confined a liberty, which it can so little abuse, and is of so little use to itself, or to us, who take it away? If there be no object so deserving contempt as an insolent child, there is none so deserving our compassion as a timid and bashful one. Since we enter, at the age of discretion, into public slavery, why should we be previously subjected to private servitude? Let us permit one moment at least of human life to be exempted from that yoke which nature has not imposed; let us permit our children the free exercise

ercise of that natural liberty which keeps at a distance, for some time at least, those vices which are contracted in the bondage of society. Let the advocates for severity, then, on the one hand, and those fond parents who are slaves to their children, on the other, offer what frivolous objections they please; it is proper for them before they boast the excellence of their own methods, to study that of nature."

"Children (adds M. Rousseau, in a note,) have but one desire only which should not be gratified, and this is the desire of *exacting obedience*. Hence it follows, that in every thing they demand, it is the motive which excites them to make such demand, which ought to engage our attention. Indulge them, as much as possible, in every thing which may give them real pleasure; but constantly refuse them what they require from motives of caprice, or merely to exercise their authority."

"It is not to be expected (he adds in a subsequent section) that he will never do any mischief, that he will never hurt himself, or perhaps break in pieces a valuable utensil that may happen to be unluckily placed within his reach. He may do a great deal of *harm* without doing *ill*; because the evil of the action depends on his *intention* to do an injury, and he will be always free from such intention. Should he not, and should he once acquire an evil intention, he is already spoiled; he is vicious almost beyond remedy. An action may be evil in the eyes of *avarice*, that is not so in those of *reason*. In leaving children at liberty to play about as they please, it is proper to remove every thing out of their way, that may render their agility or wantonness expensive; thus nothing that is brittle and costly should be left within their reach. Let the furniture of their apartment be coarse and solid. Let them have no looking-glass, no china, nor other objects of luxury. Children educated in the country should have nothing in their chamber, whereby it may be distinguished from that of the meanest peasant. To what purpose should it be carefully ornamented, when they are to stay in it so short a time?"

"But if, notwithstanding all precautions, your child should commit some disorder, or break some piece of furniture, do not go to punish or rate him for your own negligence; do not let him hear from you a single word of reproach; let him not even perceive you are displeased, but act exactly in the same manner as if it had been broken by accident. In a word, you may think you have effected a great point, if you can prevail on yourself to say nothing about the matter."

SECT. VII. Of giving CHILDREN proper IDEAS of JUSTICE.

M. Rousseau himself, acknowledges, that "it

is impossible to bring up a child in the midst of society, to the age of 12 years, without giving him some idea of the relations between man and man, and of the morality of human actions." Indeed the sooner he can be instructed in these important matters, so much the better. There is nothing to hinder a child of 5 years old, or even much younger, to acquire pretty distinct notions of justice. We have known an instance of a child considerably younger, bred up with such accurate ideas of *equality of rights*, that, having got some cooked carraways, she not only gave her young sister the half of them, dividing them equally of by one; but finding at last that there was an odd one, she bit it in two, that she might not take the advantage of her sister even to the value of *half a carraway*.

M. Rousseau's method, however, of instructing his pupil in the nature of property is not unworthy of imitation. The whole passage, indeed is interesting, though whether the *claims* or *ties* of children should be taught first, may admit of debate. "The first obligations we lie under, respect ourselves: our primary sentiment centre in our own existence; all our natural emotions, at first, relating to self-preservation. Hence our first sense of justice arises *not from what is due to others*, but from what is due from *them to us*; a circumstance which manifests another blemish in the common methods of education; whereas, in talking to children of their duties instead of their *claims*, we begin by telling them the reverse of what we ought to do, by endeavouring to inculcate what they cannot understand, and in a course that in which they cannot be interested. Had we, therefore, the direction of one of the children just spoken of, we should say to ourselves: A child strives not so much to gain the mastery over *persons*† as over other *things*; and he will soon learn from experience to respect those of the former who are superior to him in strength at years, whereas the latter cannot stand up in defence of themselves. The first notion to be given such a child is less that of liberty than that of property; and in order to give him that idea, it is necessary he should become the *proprietor of something*. To tell him of his clothes, his furniture and his playthings, is saying nothing; because although such things are at his disposal, yet he knows not how, or why, he is possessed of them. To tell him they are *his*, because they are given to him, is to just as little purpose; for, in order to give them to him, somebody must have a prior right to them; and it is *the principle of property itself* which we want to explain to him. Add this, that a gift betokens a convention or agreement between the parties, and a child cannot be made to comprehend the nature of a convention."

† "We should never permit a child to play with grown persons in the same manner as with his inferiors, nor even as with his equals. If he should ever strike anyone in earnest, though it were a foot-boy or the meanest servant, let them always return his blows with interest, and in such a manner as to make him take heed how he strikes them again. Many an imprudent governess has encouraged the anger of children; exciting them to strike others, and even herself, while she laughed at their feeble attempts; not thinking that such attempts were intentional murders in the little creatures, whose blows would have been fatal, had their strength been equal to their fury." We may here add an instance (which we know to be a melancholy fact,) of a murder actually committed by a child of 3 years old, upon her younger brother of 9 months, whom she struck a hard blow on the forehead with a table spoon, in consequence whereof he died within weeks after, of a water in the head. The nurse, who taught the child to strike all round her, was the murderer.

"It is our business to recur to the *origin and foundation of property*; for thence our first ideas thereof should arise. My pupil living in the country, has of course acquired some little knowledge of husbandry; to this end he wanted only observation and lecture, both which he possessed. It is natural to people of all ages, and more particularly to children, to wish to show signs of their power and activity, and to exert themselves in the imitation, creation, and *production* of things. Emilius has twice seen the gardener sow, and raise beans and pease, and he has already conceived a strong desire to become a gardener.

"Agreeable to the principles already established, I oppose not his inclination; on the contrary, I encourage him to it, second his design, and work along with him, not merely to please him, but myself; at least I make him *think so*. Thus I am become a gardener's labourer, and, as my pupil wants strength to handle the spade, am contented to turn up the soil for him. He takes possession of it by planting a bean; a possession certainly as sacred and respectable as Nunes Balboa took of South America, in the name of the king of Spain, by planting his standard on the coast of the South Sea. We come every day to water our beans, and see them with great pleasure come out of the ground. At the same time, I increase this satisfaction of my pupil by informing him that this *little spot belongs* to him; explaining the nature of his property therein, by representing to him that he hath spent his time, his trouble, and in short employed his whole person in the cultivation; that he has as much right to reclaim the produce thereof from any person whatever, as to wrest his arms out of the hands of any one who would retain it against his consent."

Here again our philosopher deviates from strict moral rectitude himself, in order to make his pupil a perfect moralist; and to instruct him in the principles of justice, begins by telling him what he knows to be a falsehood;—like those good priests who invented *pious frauds*, to serve the ends of Christian truth. But to return to our philosophical gardener:

"Having thus made him sensible of his right to the produce of his labour, he comes on a fine day, as usual, to water his rising plants; when, behold his beans are all torn up by the roots, the ground turned up, and the place hardly to be known. What a sight! what cause of affliction to him! His bosom swells with grief and indignation. Alas! he cries, what is become of my labour and pains, the fruit of all my toil and industry? Who hath deprived me of my property? Who hath taken away my beans? Thus, venting his exclamation at *this first sense of injustice*, he sheds a flood of tears, and fills the air with his cries and complaints. In the mean time, I take part in his distress, and endeavour to find out the author of the mischief. This is found to be the gardener, who is immediately sent for. Here appears a poor Emilius deceived in his expectations; the gardener, understanding our complaint, begins to complain louder than we. So, Gentlemen, I find, that have destroyed my fine melons, and your pretended gardening. Did you not know that I had sown some choice Maltese

melon seed on that very spot, which you dug up in order to plant your worthless beans? Yes—the seeds were given me as a curiosity, and I was in hopes to regale you daintily with the fruit when it became ripe. But you have destroyed the plants, just peeping out of the ground, and have not only done me an irreparable injury, but have deprived yourselves of the pleasure of tasting the most exquisite melons in the world.

"ROUSSEAU. Forgive us, honest Robert; we did not know, that you had bestowed your toil and pain on that spot. I see that we have been to blame, in spoiling your work; but we will send for some other seed, and supply the place of that we have dug up; and will take care, when we go to digging again, that nobody hath been there before us.

"ROBERT. Then you may throw aside your tools, Gentlemen; for there is no ground lies here uncultivated. For my part, I labour on the soil my father improved before me; and my neighbours do the same; so that all the land you see, has been occupied long ago.

"EMILIUS. Then there must be a good deal of melon seed destroyed, Mr Robert.

"ROB. Excuse me there, young Gentleman; we do not often meet with such wild little gardeners as you. With us, nobody meddles with another's garden; but has a regard to the fruits of his labour, in order to secure those of his own.

"EMIL. Well, but what must I do? I have no garden.

"ROB. That is nothing to me. I assure you, if you spoil mine, you shall walk in it no more; for, take notice, I will not throw my time and labour away.

"ROUSS. No, that would be unreasonable; but cannot we somehow accommodate this matter? What if our friend Robert was to allot us a corner of his garden to ourselves, on condition of sharing with us in the produce of it?

"ROB. That I will do, without conditions; but remember that I shall dig up your beans, if you meddle with my melons.

"In this specimen of the manner of *implanting the first notion of moral principles* in the minds of children, it is observable how naturally the idea of property refers to the right of the first occupier. This method is plain and simple, and agreeable to the capacity of a child. It is to be observed here, however, that the instructions on this head, which in theory are laid down in two or three pages, may take up a whole year to put in practice; for in the pursuit of moral ideas we cannot advance too slow nor tread too securely. Think of this example, ye young preceptors! and remember that your lectures should always consist rather of *action* than discourse; for children easily forget what they *say*, as well as what is said; but not what they *do*, or what is done to them. Instructions of this kind should be given, as we before observed, either sooner or later, according as the mild or turbulent disposition of the child may render them necessary. Their utility is obvious to the most superficial observer. To omit nothing, however of importance on a difficult subject, we shall here give another example.

"Your child, we will suppose, is so rude and boisterous

boisterous as to spoil every thing he lays his hands on. Be not angry with him; but remove what you are fearful of his spoiling, out of his reach. If he break the utensils, which he stands in daily need of, be not in haste to give him others; but let him *experience the want* of them. If he break the windows of his apartments, let the wind blow day and night upon him, without troubling yourself about his catching cold; for it is better he should catch cold, than be indulged in such frantic airs: never complain of the inconveniencies to which he may put yourself; but contrive so that he may be the first to feel their effects.

"After some time, indeed, you may have your windows mended; but without saying any thing to him: and should he break them again, change your method. In that case say to him, very coldly, and without putting yourself into a passion, 'These windows are *mine*;' I took care to have them placed there, and will prevent their being broken, by shutting you up in a dark room where there are no windows to break. At the novelty of this proceeding, he will begin to cry and storm; nobody, however, must seem to hear him. On this, he will soon change his tone, to the milder notes of sighs and complaints. At this time, let one of the servants pass by accidentally, of whom he will doubtless beg his deliverance. Without any other pretence, however, the servant should be directed to say, *I have also windows to preserve*, and then walk away. In short, after the child should have remained there some hours, long enough to tire him heartily, and make him remember it, some body should suggest to him the making you a proposal to set him at liberty, on condition of his breaking no more windows. He would desire no better terms, and accordingly would send for you to come to him. You should go, and hear his proposal, which being made, you should instantly accept of it; observing that it was a prudent thought; and that it was a pity he did not hit on it sooner, as you both would have been gainers by it. You should then, without requiring any protestation or verbal confirmation of his promise, salute him in the most friendly manner, and lead him immediately to your apartment; regarding the agreement made between you as sacred and inviolable as if attested on oath. What an idea do you think he will induce from this procedure, of the faith and utility of engagements? It is a question if there be scarcely a child in the world, not already quite spoiled, who could withstand such a proceeding, or would wilfully break a window ever afterwards."

SECT. VIII. *Of teaching CHILDREN PRINCIPLES of BENEVOLENCE and CHARITY.*

Next to giving children proper ideas of justice, or rather along with these, we ought as early as possible to impress their minds with principles of benevolence and charity. This will be found much easier at an early period of life, than after the selfish passions have begun to operate upon their minds. Indeed, if these, by the want of such early education, or by bad example or habit, once take deep root in the mind of a child, it is hardly possible ever afterwards to eradicate

the selfish principle. But children in infancy are so easily impressed with principles of benevolence, generosity and charity, that these virtues in man appear to be almost natural. They cannot therefore be too early encouraged in the practice of these virtues, while their minds are free from the opposite vices of selfishness and avarice. A judicious husbandman will not delay the cultivation of a good soil, lest he should afterwards find it overgrown with weeds.

But M. ROUSSEAU, who finds nothing right in the ordinary methods of education, objects to everything of this kind. "By appearing to preach virtue, (says he,) we make them in love with vice and encourage them to practise by forbidding. To teach them charity, we make them give as if we were above doing it ourselves. It is a master, however, that should give alms, not a scholar: indeed, how fond soever the former may be of his pupil, he ought to dispute with him the honour; he ought to make him believe that child of his age is as yet *unworthy* of so great a privilege." Here we have a strange sentiment indeed! *Unworthiness* implies a degree of criminality; but here we have a child bred up, quite untainted with vice, in the purity and innocence of nature, upon M. Rousseau's own plan, who however to be told, that he is *unworthy* of the privilege of doing a *good action*! But he assigns, must own, a very plausible reason: "To give alms (says he,) is the action of a man, who may be supposed to know the *value* of what he bestows, and the *want* his fellow-creature has of it. A child who knows nothing of either, can have no merit in giving alms: give what he will, it is *quite charity or beneficence*." This we absolutely deny. A child may not know the proportion of value between a guinea and a shilling or a penny, but he soon learns to know that these pieces purchase *something*; and a child is much earlier than M. Rousseau supposes, influenced by principles of compassion. If a child for instance see a beggar with one or two children around her, naked, ragged, complaining of cold and hunger, he can easily conceive an idea of these *wants*, and if he has plenty of money in his pocket, though he may as readily give a shilling or a guinea as a halfpenny, not knowing the difference in value, he nevertheless be anxious to give something, this from the best of principles—from the immediate influence of compassion—which will lead him even to part with his favourite cake of meats, (which M. Rousseau supposes he is worth more than 100 guineas,) if he has nothing else to give. The merit of a child in such cases, is greater than that of a man, who is too often influenced by ostentation in his charities—a man which a child has no idea. Instances of this interested generosity, we have known in very young children, and we doubt not but they were much more common, were not parents and guardians too ready to insinuate into their minds avaricious selfish principles.

As an evidence how very early these principles of compassion and generosity may appear in children, we shall mention a single fact, connected with our knowledge, in all its circumstances

child we allude to, was little more than two years old, but though she had been weaned about a year before, she continued to show as great fondness for her mother's breasts as if she had been still sucking. No person, not even her father, could touch them, but she showed the strongest marks of displeasure. In short, she seemed to consider them as *her property*, to which no other person had the smallest right. The neighbours and visitors, observing this peculiar attachment of the child to her mother's breasts rather to increase than diminish, told her she would certainly be obliged to send her to the country, as soon as she had another child, else the eldest would be ready to tear it to pieces. At last the mother was prevailed of by another daughter; but the eldest, instead of that spirit of selfish jealousy and rivalry, which the neighbours had prognosticated, expressed no feeling, but those of the most disinterested compassion and generosity,—weeping along with her new-born sister and crying out “Mammy—the bairnie—Gie the bairnie the pap!”—which, from that time forward, she never expressed any peculiar attachment to, but seemed to be happiest when she saw her young sister sucking it.”

Similar instances of early compassion and generosity, we are persuaded, are far from being rare, were they duly attended to, and would be much more numerous in children of all ages, were not parents and nurses, from a foolish propensity to foster the immediate object of their care, at much more pains to inculcate and foster the selfish than the generous principles in them; by instilling into their young minds a mean spirit of jealousy and rivalry of their elder brethren or sisters—nay, even of the dog, cat, or any other animal, if there should be no other children near them. The instance we have given is a strong evidence, that M. Rousseau is wrong in supposing, that a child is incapable of feeling for the *advants* of others. He evidently felt so much for her sister's wants, that she readily yielded up, what she seemed likely to consider as her own sole property, and to prize more than a boy bred up in the utmost luxury prizes his plum cake. If a child of 25 months old was capable of such sympathy for a new born infant, how much more may be expected from children of five or six years old, and how careful must parents be, to encourage both by example and precept, every spark of compassion, charity, and disinterested generosity, that appears in children.

We agree with M. Rousseau, however, that this ought not to be done, “by returning to children immediately whatever they give;” nor, as he justly observes, this tends only “to render a child liberal in appearance, and covetous in fact;” and can only “teach them the liberality of an usurer, when would give a penny for a pound” in return. No pecuniary rewards ought, therefore, to be given for acts of charity and generosity. The child should rather, on such occasions be led to reflect on the great good he has done to a poor man or woman, or to a helpless family of infants, who perhaps, but for his generosity, would have had nothing to eat; and when such scenes of distress (as are alas! too common) are properly

represented to his feelings, the child may then be asked, whether he has not more satisfaction in thus supplying their necessities out of his pocket money, than he could have had by laying it out upon the finest fruits, or the nicest dainties which the confectioner's shop could afford. Thus he will be taught, and will soon begin to feel, that the exercise of such virtue is in reality its own reward.

In short, we are fully persuaded, that to breed up children in the principles of virtue and morality, they must be taught these principles as early as possible; and that to inure them to the practice through life, they cannot too early begin. While the heart is young and tender, it is susceptible of every fine feeling and of every good impression; which by habit will afterwards take such firm root as never to be afterwards eradicated. But if we wait till the social virtues spring up spontaneously, as M. Rousseau advises, without ever attempting to plant or cultivate them, it is to be feared we may wait in vain, and discover when too late, that the whole soil is over-run with the weeds of self-love;—a principle, which, however necessary, as the chief spring of action and preservation in every individual, requires nevertheless our utmost exertions to keep it within due bounds; without which, indeed, it becomes the origin of every vice, that disgraces human nature. Mr Pope in his *Essay on Man*, has been at great pains to prove, agreeably to his friend Lord Bolingbroke's opinion, that

“All self-love and social are the same:”

But Zenith and Nadir are not more opposite; the one being the fountain of all that is good, and the other, when not under due restraint, of all that is evil in human nature. A proper regulation, therefore of self-love ought to be a principal object with parents and teachers in the education of children.

SECT. IX. Of INSTRUCTING CHILDREN in the FIRST PRINCIPLES of RELIGION.

There is no small difference of opinion among authors respecting the most proper period for the commencement of religious instruction. We need hardly mention that M. Rousseau pleads for this very latest period. He brings up his Emilius in such a total ignorance of religion, that “he hardly knows at 15 years of age, whether or not he hath a soul,” and he adds “perhaps it will not be time to inform him of it when he is 18; for if he learns it too soon, he runs a risk of never knowing it at all.” This argument is too absurd to merit a serious answer. It contradicts the experience of all mankind, in almost every kind of acquisition of knowledge. It reminds us of a story told by Herodotus of an ancient king of Egypt, who wishing to know what was the *true religion*, and the *original language* of mankind, thought of ascertaining these matters, by having two children bred up by dumb persons, in one of the islands of the Nile, quite separate from all society. But the experiment did not answer the monarch's expectation. The children, when they arrived at manhood, had neither language nor religion,—nor could they ever afterwards be taught to pronounce a syllable, but *beb! beb!*—Though HERODOTUS

is not an author of the greatest credibility, this anecdote is rendered extremely probable, from the well known case of *Peter, The Wild Boy*, who was found in a wood in Hanover, in the reign of K. George II; but though every attempt was made to instruct him, could never be taught language. See PETER. In like manner, we suppose a child bred up upon M. Rousseau's plan, till 18 or 20 years of age, though, having acquired language, he might indeed be taught the principles of religion, yet he would have no great relish for them. M. Rousseau himself acknowledges the influence of habit, in some cases, "Those, (says he) who attain their 20th year, without tasting fermented liquors, can never bring themselves to relish them afterwards."

We have already expressed our approbation of the period adopted by Dr Beattie, as the most proper for initiating his son in the knowledge of a Deity. Dr Isaac Watts, however, and most other divines are for communicating to "children, as soon as they begin to know almost any thing, so much of religion as is necessary for their age and state." Others propose a medium between these extremes, and propose 8 or 9 as the proper period. Among these last is Mr HERON, whose sentiments on the subject in general, (though we think his period rather late) we shall quote from the last edition of the *Encyclopædia Britannica*.

"We cannot presume to determine at what particular period children ought to be first informed of their relations to God and to society, and of the duties incumbent on them in consequence of those relations. That period will be different to different children, according to the pains which have been taken, and the means which have been employed, in cultivating their natural powers. Perhaps even where the most judicious maxims of education have been adopted, and have been pursued with the happiest effects, it cannot be sooner than the age of 8 or 9. But even before this period much may be done. Show the child your reverence for religion and virtue; talk in his presence, and in the plainest, simplest terms, though not directly to him, of the existence of God the creator, the preserver, and the governor of the world; speak of the constant dependence of every creature on the gracious care of that Being; mention with ardour the gratitude and obedience which we owe to him as our great parent and best benefactor: next, speak of the mutual relations of society; of the duties of children and parents, of masters and servants, of man to man. At length when his mind is prepared by such discourses which have passed in his presence without being addressed to him, you may begin to explain to him in a direct manner the leading doctrines of religion. He will now be able to comprehend you, when you address him on that important subject: the truths which you communicate will make a powerful impression on his mind; an impression which neither the corruption and dissipation of the world, nor the force of appetite and passion, will ever be able to efface."

"Some writers on this subject have asserted, that youth are incapable of any just ideas of religion till they attain a much more advanced age;

and have insisted, that, for this reason, no attempts should be made to communicate to them the articles of our creed in their earlier years. This doctrine, both from its novelty and from its pernicious tendency, has provoked the keenest opposition. It has, however, been opposed rather with keenness than with acuteness or skill. Its opponents seem to have generally allowed, that children are incapable of reasoning and of moral distinctions, but they have ascribed wonderful effects to habit. Enrich the memories of children, say they, with the maxims of morality, and with the doctrines of religion; teach them prayers, and call them to engage in all the ordinances of religion. What though they comprehend not the meaning of what they learn? What though they understand not for what purpose you bid them repeat their prayers, nor why you confine them on the Lord's day from their ordinary amusements? Their powers will at length ripen, and they will then see in what they have been employed, and derive the highest advantage from the irksome tasks to which you confined them. You have formed them to habits which they will not be able to lay aside: After this they cannot but be religious at some period of life, even though you have inspired them with a disgust for the exercises of religion. Those good people have also talked of the principle of the *association of ideas*. As no man stands alone in society, say they, no one idea exists in the mind single and unconnected with others: as you are, connected with your parents, your children, your friends, your countrymen; so the idea of a tree, for instance, is connected with that of the field in which it grows, of the fruit which it bears, and of contiguous, dissimilar, and resembling objects. When any one set of related ideas have been often presented to the mind in connection with another, the mind at length comes to view them as so intimately united, that any particular one among them never fails to introduce the rest. Review the scenes in which you spent your earliest years; the sports and companions of your youth naturally arise to your recollection. Have you applied to the study of the classics with reluctance and constraint, and suffered much from the severity of parents and tutors for your indifference to Greek and Latin? you will, perhaps, never throughout the course of life see a grammar school, without collecting your sufferings, nor look on a Virgil or Homer without remembering the stripes and confinement which they once occasioned to you. In the same manner, when religious principles are impressed on the mind in infancy in a proper manner, an happy association is formed which cannot fail to give them a powerful influence on the sentiments and conduct in future life. But we have advanced to manhood before being formed of the existence of a Deity, and of our relation to him; the principles of religion, when communicated, no longer produce the same happy effects: the heart and the understanding are no longer in the same state; nor will the same associations be formed."

"This doctrine of the *association of ideas* has been adduced by an ingenious writer, (Dr PRINGLE) distinguished for his discoveries in natural

loquely, and for his labours in controversial divinity, as an argument in behalf of the propriety of instructing youth in the principles of religion even in their earliest years. We admire, we esteem, the spirit which has prompted him to discover so much concern for the interests of the rising generation; but at the same time we will not conceal our opinion, that even this argument ought to be urged with caution. Many of the pretensions of human nature may indeed be expanded, if we have recourse to the principle of education. The influence of any principle, religious or moral, depends in a great measure on the ideas and images which, in considering it, we have been accustomed to associate with it in our minds. But what are the ideas or images most likely to be associated by children with the doctrines and duties of religion, if we call them to listen to the one and perform the other at too early a period? Will they be such as may assist the influence of religion on their sentiments and conduct in the future part of life? Observe the world: Are those who, in infancy, have been most rigidly compelled to get their catechisms by rote, either the most pious or the best informed in religious matters? Indeed, when we consider what has been said of the influence of habit, and of the association of ideas, we cannot help thinking, that any arguments which on the present occasion may be adduced from either of these, tend directly to prove, not that we ought to pour in religious instruction into the minds of children, without considering whether they be qualified to receive it; but, on the contrary, that we ought cautiously to wait for and catch the proper season;—that when the youthful mind, no longer a stranger to our language, our sentiments, our views of nature, or our manner of reasoning, will be able to go along with us, when we talk to him of a Supreme Being, of our condition as dependant and accountable creatures, of truth, benevolence, and justice.

“We flatter ourselves, then, that our readers will readily agree with us, and that the moral and reasoning powers of children begin to display themselves at a very early age, even in infancy. That as soon as they have made themselves acquainted with the most obvious appearances of nature, and have gained a tolerable knowledge of our language and our manner of arranging our ideas in reasoning, we may with the greatest propriety begin to instruct them in the principles of religion. Lastly, That the most careful and judicious observation is necessary, to enable us to distinguish the period at which children become capable of receiving religious instruction; because, if we either attempt to communicate to them these important truths too early, or defer them till too remote a season, we may fail of accomplishing the great end which we have in view.

“If we can be so fortunate as to choose the happy season for sowing the first seeds of piety in the infant mind, our next care will be to sow them in a proper manner. We must anxiously endeavour to communicate the principles of religion and morality, so as they may be easiest comprehended by the understanding of the learner, and may make the deepest impression on his heart.

It would be a matter of the greatest difficulty to give particular directions on this head. The discretion of the parent or tutor must here be his guide. We are afraid that some of the catechisms commonly taught are not very happily calculated to serve the purpose for which they are intended. Yet we do not wish that they should be neglected, while nothing more proper is introduced in their room. In instructing children in the first principles of religion, we must beware of arraying piety in the gloomy garb, or painting her with the forbidding features, in which she has been represented by anchorites, monks, and puritans. No; let her assume a pleasing form, a cheerful dress, and an inviting manner. Describe the Deity as the affectionate parent, the benefactor, and though the impartial yet the merciful judge of mankind. Exhibit to them Jesus Christ, the generous friend and saviour of the posterity of Adam, who with such enchanting benevolence hath said, “Suffer little children to come unto me.” Represent to them his yoke as easy, and his burden as light. Insist not on their laying long prayers or hearing tedious sermons. If possible, make the doctrines of religion to appear to them as glad tidings, and its duties as the most delightful of tasks.”

SECT. X. Of ACCUSTOMING CHILDREN to DARKNESS.

Almost all children, and even many adults are afraid of being in the dark. Upon this subject M. Rousseau has the following remarks:

“We are not all equally expert in the use of our senses. There is one, to wit, the touch, whose action is never suspended while we are awake, and which is extended over the whole surface of the body, as a continual guard to give us notice of every thing that may be offensive. It is by means of the continual and involuntary exercise of this sense, that we acquire our earliest experience, which makes it the less needful for us to give it any particular cultivation. We find, however, that blind people have a much stronger and more delicate sense of feeling than we; because, having no information from the sight, they are obliged to deduce the same conclusions from the former sense only, which we are furnished with by the latter. Why then should we not learn to walk, like them, in the dark, to know bodies by the touch, to judge of the objects that surround us; to do, in short, by night, without candles all that they do by day without eyes? While the sun is above the horizon, we have the advantage of them and lead them about; but in the dark they are our guides and take the lead in turn. We are as blind as they during one half of our lives, with this difference, that those who are really blind can at all times find their way about, whereas we that have eyes hardly dare to stir a foot in the night. Will it be said, We may call for candles and torches? We may so: but this is to be always recurring to machines; and who can assure us they will always be at hand?

“Should you be shut up in a house in the middle of the night, clap your hands, and you may perceive by the echo, whether the room you are in be large or small; whether you are in the mid-

die or in one corner. Within six inches of the wall, the very air will give a different sensation to your face to what it does in the middle of the room. Turn yourself round successively, facing every part of the room, and if there be a door open, you will perceive it by a gentle draught of air. Are you in a vessel upon the water? You may know by the manner in which the air strikes against your face, not only which way you are going, but whether you go fast or slow. These observations, and a thousand others of a similar kind, can be made only in the night; for whatever attention we bestow on them in the day-time, we are always so far either assisted or prevented by the sight that the experiment escapes us. We here make use neither of hands nor sticks; indeed, we might acquire a considerable share of ocular information by the touch, even without touching any of the objects in question,

"We should provide a variety of diversions for the night. This piece of advice is of much greater importance than it may at first appear. The night naturally strikes a terror into men as well as brute animals. Reason or knowledge, wisdom or courage, deliver few persons from paying this tribute to darkness. Casuists, freethinkers, philosophers, and even soldiers, whom nothing could daunt by day, have been known to tremble by night, like women, at the rustling of the leaves of a tree. This timidity is usually attributed to the idle tales told us when young, by our nurses. This, however, is a mistake; it is founded in nature; the cause of it being the same as that which makes deaf people mistrustful, and the vulgar superstitious; that is, *our ignorance of the things that surround us*, and of what is passing about us. Being accustomed to perceive objects at a distance, and to anticipate their impressions, how can we help supposing, when we no longer see any thing of such objects, that there may be a thousand hurtful things in motion around us, from which we cannot guard ourselves? It is to no purpose that we are convinced of our security in the place where we are; we can never be so fully persuaded, as if we had ocular proof of it: we have, therefore, always a motive for fear in the night, which we should not have in the day time.

"The cause of the evil being found, it sufficiently indicates the remedy. Habit, in every thing, destroys the effect of imagination: these are excited only by the novelty of the object. The imagination is never employed in those which are familiar to us; these affect only the memory: and hence we see the reason of the axiom, *Ab affectu non fit passio*; for the passions are lighted up only at the fire of the imagination. Never argue, therefore, with those whom you are desirous to cure of the fear of being in the dark; but entice them often into it; and be assured that all the philosophical arguments in the world will be of less avail than that practice. A bricklayer, or a tyler, is never made giddy by looking down from the roofs of houses; nor do we see those who are accustomed to go about in the obscurity of the night, under any terrors on that score.

"Here, then, is another advantage arising from our nocturnal entertainments, to be added to the

former: but, in order that such diversions should answer the end proposed, we cannot too much recommend cheerfulness and gaiety. Nothing more dismal than to be in darkness: never shut up a child, therefore, to remain in a dungeon. On the contrary, let him go laughing into the dark, and come laughing out again: take care that the notion of the amusement he hath just been and is going again to partake of, may defend him from those fantastic ideas which might otherwise intrude on his imagination.

"In a large saloon or dark antichamber, make a kind of labyrinth, with stools, tables, screens, &c. In the most inaccessible part of these, place some little boxes, all of a sort and size, one of which only should be filled with sweetmeats: describe in short and plain terms the place where this lies; and after making the little candidates consult for precedence, each should go in his turn till the prize be found. The directions given should appear plain enough to persons in any degree more attentive and less blundering than children; and should increase the difficulty of finding the box in proportion to their dexterity. First to yourself a little Hercules coming in with a torch in his hand, clad with the supposed success of his expedition. It is laid down on the table, and opened with a deal of ceremony. How wild are the peals of laughter and hisses of the joyful little company, when, instead of the expected sweetmeats, nothing is found in it but a fish-shell, a coal, an acorn, a little turnip, or so much trifle, carefully wrapt up in moss or cotton.

"What advantages would not a man, educated in this manner, have, in the night, over others? His feet accustomed to tread firm and secure, hands exercised in the touch of surrounding objects, are capable of conducting him with ease through the thickest darkness. His imagination full of the nocturnal amusements of his youth, easily diverted from terrifying objects. If he be the fits of unexpected laughter, instead of conceiving them to be the effects of ludicrous spirits, they recall to mind those of his former companions: if his imagination raises up a nocturnal assembly, it is not a meeting of witches, but of those he formerly attended in the apartment of his preceptor. The night, recalling to his mind not but cheerful ideas, will never appear hideous: the contrary, having nothing to fear, he will be at light in it. Is he required to go on a military expedition? He will be ready at any hour, and with his company or alone. He will be able to go into the camp of Saul, to explore every part of it, without bewildering himself, to march forward even to the king's tent, without awaiting the guard, and to return unperceived by the sentinels. Are you to carry off the white horse of Rhefus? Apply boldly to him. Among persons differently educated, you will not easily find a Ulysses. Some people endeavour to cure children of being fearful in the night, by using them to frequent surprises. This method, however, is a very bad one, and productive of a contrary effect to that for which it is calculated; rendering them not only the more timid. Neither reason nor habit can possibly make us perfectly easy concerning

an object of present danger, of which we know neither the kind nor the degree; much less can they deprive us of the fear arising from those surges we may often have experienced."

SECT. XI. *Of the SLEEP necessary for CHILDREN.*

"Children require a good deal of sleep, because they use much exercise. The one serves to counterbalance the other; so that hence we see they have need of both. The proper time for rest is pointed out by nature, and is in the night. It is a certain observation, that our sleep is more tranquil and agreeable when the sun is below the horizon; the air, heated by its direct rays, never bringing our senses in so profound a calm. Hence the most salutary habit is certainly to rise and lie down with the sun; and hence it follows, that, in these climates, men, as well as all other animals, require in general more sleep in winter than in summer. But the state of civil life is not sufficiently ample and exempted from accident, for us to think of using a child to such an uniformity, as far as to render it necessary. He ought, without doubt, to be subject to some regulations in this respect; but our chief rule should be to enable him to depart from them when occasion requires, without endangering his health. Do not restrict your pupil, therefore, by indulging him in late and uninterrupted slumbers. Let him enjoy himself at first without restraint, as the law of nature dictates; but forget not, that in society it is frequently necessary to be above that law. He should be used, therefore, as he grows up, to fit to wake, and rise early; to be waked unexpectedly out of his sleep, and to sit up occasionally all night, without inconvenience.

"It is of great consequence to accustom our senses betimes to indifferent lodgings: it is the way to prevent our ever meeting with bad beds; and in general any hardy way of living, when we are once used to it, increases the number of agreeable sensations; whereas a soft and luxurious life prepares us for an infinity of displeasing ones. Persons tenderly brought up cannot go to sleep but on a couch of down; those who are accustomed to lie on the floor, can sleep any where. The man who falls asleep as soon as he lies down, knows not the hardness of his bed.

"The best bed is that which procures the best sleep. We know by experience, that, when a child is in health, we may make it go to sleep or keep it awake, almost as we please. When children are put to bed, and the nurse is tired with their prattle, nothing is more common than for her to bid them go to sleep. But this is much the same thing as if she should bid them be well, when they are sick. The right way to make children go to sleep, is to weary them, and not to restrict.

"Awaken your pupil sometimes, lest for fear he should get a habit of sleeping too long, than to accustom him to every thing, even to the circumstance of being awakened suddenly. We ought to make him wake of himself, and rise, in a moment, at our pleasure, without saying a single word to him about the matter. If, for instance, he does not usually sleep enough, let him foresee that he will have but a disagreeable morning; in

consequence of which he will think all the time clear gain that he spends of it in sleep. On the contrary, does he sleep *too much*, provide for him some amusement that he is fond of against he awakes. Are we desirous of teaching him to wake at a certain hour? Let his preceptor say to him, "To-morrow morning at six o'clock I propose the diversion of angling, or I shall take a walk to such a place; will you be of the party?" He consents, and desires to be called; this is either promised or not, as occasion may require. If he wakes too late, he finds the party gone. Hence he sees his misfortune, if he does not soon learn to wake another time without being called.

"When it so happens, which however is very rare, that an indolent child gives itself up to sloth and inactivity, it should not be indulged in such a vicious propensity, but stimulated by some powerful motive to action. It will be readily conceived, that it is not meant we should proceed to use absolute force, but only to employ the stimulus of *some appetite* that may answer that end."

SECT. XII. *Of the DRESS proper for CHILDREN.*

"The limbs of a growing child should have room enough in its clothes; he should have nothing to restrain his motions or growth, nothing too tight, no ligatures about him. The dress of the English, too close and confined even for men, is particularly prejudicial to children. The best way is to let them go as long as possible in loose vests; and, afterwards, to let their clothes be made large enough; and not to stand upon their displaying a fine shape, by means which will only serve to destroy it. Their defects, both of body and mind, arise almost all from the same cause: we are desirous of making men of them before their time. With respect to the colour of their clothes, children are generally fond of the gay and lively: they suit them better also, and there is no reason why we should not in such cases consult their natural inclinations; but, as soon as ever they begin to prefer one stuff to another because it is rich and costly, their hearts are infected by *luxury* and the *caprices of opinion*. This kind of taste, assuredly, they have not acquired of themselves. It is not easy to say what an influence the choice of clothes, and the motives for that choice, have on education. We not only see fond mothers ridiculously promising their children fine clothes, as a recompence for their good behaviour; but often hear foolish preceptors threatening their pupils with coarser and plainer clothes, as a punishment for their faults. "If you do not mind your book better, if you do not keep your clothes cleaner, you shall go dressed like a ploughboy." Is not this as much as to tell them, *that the merit and importance of a man lie in his garb*, and that theirs consist entirely in their dress? Is it to be wondered at, that youth profit by such wise lessons; that they hold nothing in esteem but dress, and judge of merit by external appearances?

"Should it be necessary to correct a child that has been spoiled in this manner, take care that his *richest* clothes prove the *most inconvenient*; that he should be hardly able to stir his arms and move about in them; take care that his *liberty and gaiety* be

he in every shape sacrificed to his *magnificence*. If he at any time join in the play of other children more plainly dressed, they should give over and disappear immediately. In a word, you should so tire him out with his finery, and render him so great a slave to his laced clothes, that he should soon think them the plague of his life, and do any thing rather than put them on. If a child be not subjected to our own idle notions and prejudices, his chief desire is to be easy and at liberty. The most simple, the most convenient dress, is always the most prized.

"There is an habit of body proper for persons who take much exercise, and another more suitable to the sedentary and inactive. The latter, preserving an equal and uniform circulation of the fluids, should be defended against the alterations of the air and the weather; the former, passing from labour to rest, and from heat to cold, ought, on the contrary, to inure themselves to such alterations. Hence it follows, that studious and indolent people ought always to go warmly clothed, in order to preserve the body in the same temperature, as near as possible, at all times and seasons. Those, on the other hand, who come and go in the wind, the sun, and the rain, who take a good deal of exercise, and pass most of their time in the open air, ought to be clothed lightly, in order to habituate themselves to all the vicissitudes in the temperature of the air, without injury. Children, in general, are too warmly clothed; particularly in their earliest infancy. It is much better to inure them to bear cold than heat. The former will never hurt them, if they are exposed to it early; but the latter subjects them to an inevitable waste of strength of spirits. On a comparison between the northern people and the inhabitants of the southern climates, mankind grow more robust by supporting excessive cold, than they do by bearing excessive heat. As your child grows up, however, and his fibres gather strength, you should inure him by degrees to bear the rays of the sun; which you may thus easily effect, till he should run no risk even from the scorching heat of the torrid zone."

SECT. XIII. *Of Teaching CHILDREN to READ.*

We have already given it as our opinion, that it is proper to begin to teach children reading between 5 and 6 years of age. But as some children are of more slow capacities than others, it may be proper not to begin with them quite so early, lest they should be discouraged by the slow progress they make. But certainly the dullest of children may be taught to read their mother tongue, between 7 and 10 years of age. Rousseau, however, initiates his *Emilius* in this necessary accomplishment, two years later than even this latest period.

"READING (says he) is a vexation to children, and yet it is the only occupation they are usually employed in. Our pupil will hardly know what a book is at *twelve* years of age. But you will say, he ought surely to *learn to read*, at least. Yes, he shall learn to read when reading will be of any use to him: till then, it is good for nothing but to disgust and fatigue him."

However much we disapprove of the late pe-

riod fixed by our philosopher for beginning to teach children reading, we cannot but express our approbation of the method he proposes to excite their desire to learn it.

"If nothing is to be required of children merely out of obedience, it follows that they will learn nothing, whether of use or amusement, unless they perceive *some present advantage* in it; what other motive should induce them? The art of speaking to persons who are absent, of understanding them in turn, of communicating to those who are at a great distance, our sentiments, our inclinations, and desires—this is an art, whose utility may be made known to the simplest understanding. Whence comes it, then, that an art so useful and agreeable should prove so tormenting to children? The reason is plain: the constraint they lie under of cultivating it *against their inclinations*, and the misapplication of it to what they cannot comprehend. It cannot be expected a child should be very curious to perfect those means by which he is tormented. Find out the way, making them useful to his pleasures, and he will then apply to them of his own accord.

"It has been made a matter of great importance, to find out the best method of teaching children to read; and to this end cards and other implements have been invented, so various and numerous, that they make the nursery resemble the workshop of a printer. Mr Locke would have a child taught to read by means of letters carved on dice. Is not this an excellent invention? more certain method than any of these, and the which is nevertheless always neglected, is to *cite in children a desire to learn*. Give a child the desire, and do as you will with your cards and dice. Any method will then be sufficient.

"The grand motive, indeed the only one that is certain and effectual, is *present interest*. In way of example we will suppose our pupil sometimes receives written invitations from his father, mother, and other friends, to dinner, to go out of party of pleasure, or to see some public entertainment. These invitations are short, plain, precise, and well written. When received, it is necessary for him to find somebody to read them to him: such a person is not always at hand, or so pleasant enough to comply with his request. The opportunity is lost: the billet, indeed, is sent to him *afterwards*, but then it is *too late* to obey the summons. How ardently must he wish for such an occasion to be able to read *himself*! He receives others, equally short and interesting. He sets immediately about deciphering them; sometimes receiving assistance, and at others denied. By dint of study, he at length hammers out what he is invited to go to-morrow to eat cakes; and where, or with whom, he cannot discover. He makes efforts will he not make to find out the rest. No doubt he will learn to read and even to write by such means as these, without standing in need of horn-books, cards, or dice. It is an important maxim, that children in general acquire speedily and certainly, what they are *not importuned to learn*."

Upon the important question what books are proper to be put into the hands of children, who are learning to read, and particularly upon the pre-

vice of making them read and get by heart fables, he has the following reflections, which appear to be no less humorous than just :

"Our pupil shall never be set to learn any thing by heart, not even fables, not even the fables of *Fontaine*, simple and beautiful as they are; for the words of a fable are no more the fable itself, than those of a history are the history. How is it possible men can be so blind as to call fables the moral lectures for children, without reflecting that the apologue, in amusing, only deceives them; and that, seduced by the charms of falsehood, the truth couched underneath it escapes their notice? Yet, so it is; and the means which are thus taken to render instruction agreeable prevent their profiting by it. Fables may instruct grown persons, but the *naked truth* should ever be presented to children: for, if we once spread over it a veil, they will not take the trouble to draw it aside in order to look at it.

"Children universally read the fables of *Fontaine*, and yet there is not one who understands them. It would be still worse, however, if they did understand them; for the moral is so complicated and *disproportionate to their capacities*, that it would rather induce them to vice than virtue. You will say this is a paradox; be it so; let us see whether what is affirmed be not true.

"A child certainly does not comprehend the fables which he gets by rote; because whatever pains we take to render them simple, the instruction we would deduce from them is attended with other ideas above his capacity; and because that even the poetic turn given them, in order to make them the more easily remembered, makes them, at the same time, the less easily comprehended; so that they are rendered entertaining at the expense of perspicuity. Not to mention many of these fables that are totally unintelligible and useless to children, and which nevertheless are indiscriminately taught them, because they are found mixed with the rest, we shall confine ourselves to that which the author appears to have written especially for children.

"Is the whole collection of *Fontaine's fables*, there are but 3 or 6 that are eminently distinguished for poetic simplicity. Of these, by way of an example, we will take the first; the moral of which is the most adapted to children, being that which they understand best, and learn with the greatest pleasure; it is that also which the author has, for this reason, placed at the beginning of his book. On the supposition that the object of this tale be intelligible to children, and capable of affording them instruction and amusement, it is certainly his master piece; we will take the freedom therefore to give it a short examination. Its title is, *Le Corbeau et le Renard*; the Raven and the Fox.

"Master Raven, on a tree perched,"

"Master: What is the signification of the word *perched*, in itself? What is the case of it before a proper name? and what is the particular meaning of it on this occasion? We must next tell the child what is a raven. But what is *sur un arbre perché*? We must not say, on a tree perched, but perched on a tree. We must therefore talk to him of the transposition of words by poetical licence, and

instruct him in the difference between verse and prose.

"Held in his beak a cheese."

"What kind of a cheese? Was it a Swiss, or a Dutch cheese? If a child has never seen ravens, what can you get by talking to him about them? and if he has seen them, how will he conceive they could hold whole cheeses in their beaks? Let our descriptions be ever agreeable to nature.

"Master Fox, by the smell allured,"

"Master again! but this may be thought a good title for a fox, who may be supposed to have taken up his degrees in the arts of his profession. We must, however, describe the nature of the fox, and distinguish between his natural character and that which is given him in fable. *Alléché* is an obsolete word, and used only in verse: a child, being informed of this, will naturally ask, why we talk otherwise in verse than in prose? What answer will you make to such a question? Again, *Allured by the smell of a cheese!* This cheese held by a raven perched on a tree, must surely have a strong smell to be scented by a fox lurking in a thicket, or earthed in a burrow. Is this the method you would take to exercise the genius of your pupil; to teach him to suffer himself not to be imposed on, and to discern truth from falsehood in the relations of others?

"Held with him nearly this discourse."

"*This Discourse!* Do foxes talk then? and do they speak the same language as ravens? Take care, sagacious preceptor! consider well before you reply to these questions of your pupil. It is of more consequence, perhaps, than you imagine.

"Ha! good morrow, Monsieur Raven!"

"*Monsieur!* So, *Mr* is a title which the child hears turned into ridicule before he knows it is a mark of respect. Again, those who may read this passage, *Monsieur du Corbeau*, will have enough to do, before they explain to a child the meaning of the particle *du*.

"How charming you are! how beautiful you seem to me!"

"Wretchedly expletive and redundant! A child, hearing the same thing repeated in different words, will hence learn a loose and inaccurate method of speaking. If you say this redundancy is a piece of art in the writer, and agreeable to the design of the fox, who would seem to multiply his praises by making use of different terms this excuse is sufficient with me, but it is a very bad one to be given to my pupil.

"Without lying, if your singing"

"*Without lying!* So, then it is usual to lie sometimes: but what would your pupil think, if you were to tell him, the fox says this only because he is actually telling the raven a lie?

"Be answerable to your feathers,"

"*Answerable!* What can the word mean? Endeavour to teach a child to compare two qualities so different as the plumage and the singing of a bird; and see how well he will understand you.

"You are a phoenix among the lords of these woods."

"*A phoenix!* What is a phoenix? Behold us already entering upon the fictions of the ancient mythology. *The lords of the woods!* How figurative!

native! The flatterer raises his language, and gives it more dignity, in order to render it the more seductive. How is a child to understand this fineness? Does he know, is it possible that he should know, the difference between an elevated and a mean style?

"At these words, the raven is out of his wits with delight;"

"A child must have already experienced very lively and strong passions, to be able to comprehend this proverbial mode of expression.

"and to display his fine fingering,"

"It must not be forgotten, that, in order to understand this verse and the whole fable, a child ought to be previously made acquainted with the fine fingering of a raven.

"He opens his large beak, and lets fall his prey."

"He opens, &c. This verse is admirable; the sound and the sense go incomparably well together. We see his wide beak open, and hear the cheese rattle down through the boughs: but this kind of beauty is lost on children.

"The fox snapped it up; and then said, My good Sir,"

"Good Sir! See already goodness made synonymous to folly. Is it not indeed mere loss of time thus to instruct children?

"Learn that every flatterer"

"A general maxim! Children know nothing of general maxims.

"Lives at the cost of those who listen to him."

"No child of ten years of age can understand the meaning of this line.

"This lesson is worth a cheese, without doubt."

"This line is intelligible, and the thought is good. There are, nevertheless, but few children who are capable of comparing a moral lesson to a cheese; and fewer who would not prefer the cheese to the lesson. They must be taught, therefore, to look upon this as a piece of railery. What a deal of subtilty is here required of children!

"The raven, ashamed and confused,"

"Another pleonasm; but this is excusable.

"Swore, though somewhat too late, he would never be so deceived again."

"Swore! Where is the preceptor weak enough to explain to a child the nature of an oath? These remarks may to some appear circumstantial: they are much less so, however, than would have been necessary to analyse all the complex ideas of that fable, and to resolve them into the simple and elementary ones of which they are composed. Yet who thinks such analysis necessary to make ourselves understood? We are none of us philosophers enough to put ourselves in the place of children. But to proceed to the moral of the fable:

"We would first ask, if there are any children of six years of age, whom it would be proper to teach, that mankind flatter and deceive each other through motives of self interest? One might teach them, indeed, that there are satirists who laugh at little boys, and privately ridicule their childish vanity: but the cheese spoils all: and they learn less to prevent its falling from their own mouths, than how to make it fall from the mouths of others. This is another paradox, and not the least important.

"Trace the progress of children in learning fables, and you will find, that, when they are in capacity to make any application of them, they almost always do it in a manner contrary to the intention of the fabulist; and that, instead of remarking the error or fault you are desirous of guarding them against, they fall in love with the vice of the party exposed. In reading the fable above cited, children laugh at and despise the silly raven; but they are fond of the fox. In the next fable of the same collection, you think all to set them an example of the grasshopper: you are mistaken: they prefer that of the ant. Nor are they fond of humiliation; all choose to act the shining part; it is the choice of self love, it is every respect natural. But what a shocking lesson is this fable for children! A covetous child would be the most detestable of all monsters, whose sense of what was asked of it, and what it refused. The ant in the fable does more than this: he not only refuses to assist the suppliant in distress, but aggravates that refusal with railery and reproach.

"In all fables where a lion is introduced, it is generally the most shining character, a child never fails to take upon himself the part of the lion, and when he presides at any distribution he generally profits by his model, and sweeps all to his own share. But when the gnat stings the lion, the quick, it is another affair: the child is then no longer the lion, but the gnat; and learns then in what manner he may some time or other kick those with the prick of a pin, whom he durst not attack openly. In the fable also of the lean wolf and the fat dog, instead of deducing from it a lesson of moderation designed, he is encouraged to licentiousness.

"Thus the moral of the first fable, is to a child a lesson of the most servile flattery; that of the second, a lesson of inhumanity; that of the third of injustice; that of the fourth, of satire; that of the fifth, of independence. This last lesson is superfluous to our pupil, and not more expedient for yours: for when the precepts you still are contradictory to each other, what can you expect from them? But, perhaps, the defect in the moral of fables, which makes us subject to them, may furnish a reason for your preserving their use. In the world, there is one kind of morality in discourse, and another in action, both which never agree together. The first is to be found in the catechism, where we shall learn it; the other we meet with in Fontaine: in fables, as to what regards children; and in tales, as to what relates to their *mammas*. The same author suffices for both.

"But let us compromise this matter with Fontaine. We ourselves may read, and admire his fables, because we are not afraid of being taken in their design. But, as for our pupil, we cannot suffer him to read a line in the book, we become convinced that it is proper for him to get words *by rote*, of which he does not understand one fourth part; that the meaning which may annex to some, cannot be false; and that instead of profiting by the example of the dupe, he may not learn himself on that of the knave.

See

SECT. XIV. *Of OTHER BRANCHES of EDUCATION proper for CHILDREN BETWEEN FIVE and TEN YEARS of AGE inclusive.*

As soon as boys and girls can read and spell with tolerable facility, and have acquired sufficient strength of arm and fingers to hold a pen, it is proper to initiate them in the art of writing. This all most children will learn with little difficulty. Their natural disposition to imitate whatever depends on manual operation, renders this art peculiarly easy and pleasing to them, when they are not harshly forced to apply to it, nor suffered to get into a habit of performing their task with haste and negligence. It requires indeed the most cautious prudence, the nicest delicacy, and the most arduous address, to prevail with children to give a cheerful and attentive application to any appointed task. It is, however, hardly possible to give particular directions how to treat children so as to draw them to learning, and at the same time to command their serious attention. But the prudent and affectionate parent and the judicious tutor will never be unsuccessful; unless the child or pupil be uncommonly deficient in capacity. About ten years of age, it will be proper to initiate a pupil in the first principles of arithmetic. This period, however, may perhaps be found too early for children of a slow capacity. The most certain rule, therefore, is, not to attempt to teach children arithmetic, till their reasoning powers appear to have attained such strength and quickness that they will be able to comprehend them. Arithmetic affords more exercise to the reasoning powers of the mind than any other of those branches of learning to which we apply in our early years: and if the child's attention be directed to it at a proper period, and if care be taken to make him comprehend fully the principles upon which each operation proceeds, it will contribute greatly to increase the strength and acuteness of his mental powers.

About this period too, or rather a year earlier, it is usual to put such boys as are intended for a classical education to the Latin school. It will not be expected that we should here lay down precise rules for those who teach Latin, what books they should prefer, and in what order, or how they should commence and carry on their instruction. Most teachers form plans of their own, but those who wish for particular directions on this important point, we would advise to consult Dr CHAPMAN'S *Treatise on Education, Part II. Sect. IV.* with the *Sketch of the Author's Method of Instruction, while he taught the Grammar School of Dunstable*, which is annexed to that work, and which we reckon the most complete and comprehensive of any hitherto published. We shall therefore only quote two general advices from the Doctor on this head, viz. 1. That teachers "should beware of rendering the duty of children disagreeable to them by enforcing it in an indistinct and spasmodic manner:" and 2. That though it may be proper to initiate him in Latin, "it is ill-judged to push a child through the classics during this period of life: For if he cannot compare his ideas, and express things by terms synonymous to them in

another language; but he will not comprehend the idioms or spirit of either. And if he is taught to content himself with words, without understanding their meaning or connection, and to take upon trust what he sees not the use of, his memory may indeed be stored with words, but his judgment will be incumbered, and his progress in reality retarded."

But as it is not unfashionable in the present age, even among the learned to decry a classical education, and several eminent authors, particularly Dr Rush of Philadelphia, have expressed their opinion of its inutilty, we shall subjoin, in addition to Dr Chapman's sentiments already quoted (in PART I. SECT. VI.) the opinion of Mr Heron, both of whom we entirely coincide with on this subject.

"The languages of Greece and Rome (says he) are so highly distinguished for their copiousness, their regular analogy, and for various other excellencies, which render them superior to even, the chief of modern languages, that the study of them has a natural tendency to improve and enrich modern languages. If we look backwards to the 15th century, when learning began to revive in Europe, and that species of learning which began first to be cultivated was classical literature, we find that almost all the languages then spoken in Europe were wretchedly poor and barbarous. Knowledge could not be communicated, nor business transacted, without calling in the aid of Latin. Classical learning, however, soon came to be cultivated by all ranks with enthusiastic eagerness. Not only those designed to pursue a learned profession, and men of fortune whose object was a liberal education without a view to any particular profession; but even the lower ranks, and the female sex, keenly studied the languages and the wisdom of Greece and Rome. This avidity for classical learning was followed by many happy effects. But its influence was chiefly remarkable in producing an amazing change on the form of the living languages. These soon became more copious and regular; and many of them have consequently attained such perfection, that the poet, the historian, and the philosopher, can clothe their thoughts in them to the greatest advantage. Could we derive no new advantage from the study of the ancient languages, yet would they be worthy of our care, as having contributed so much to raise the modern languages to their present improved state. But they can also conduce to the preservation and support of those noble structures which have been reared by their assistance. The intercourse of nations, the affectation of writers, the gradual introduction of provincial barbarisms, and various other causes, have a tendency to corrupt and debase even the noblest languages. By such means were the languages of Greece and Rome gradually corrupted, till the language used by a Horace, a Livy, a Xenophon, and a Menander, was lost in a jargon unfit for the purposes of composition. But if we would not disdain to take advantage of them, the classical works in those languages might prevent that which we use from experiencing such a decline. He who knows and admires the excellencies of the ancient languages, and the beauties of those writers who have rendered

dered them so celebrated, will be the firm enemy of barbarism, affectation, and negligence, whenever they attempt to debase his mother tongue. We venture therefore to assert, that when the polished languages of antiquity cease to be studied among us, our native tongue will then lose its purity, regularity, and other excellencies, and gradually decline till it be no longer known for the language of Pope and of Addison; and we adduce it as an argument in behalf of classical learning, that it has contributed so much to the improvement of the living languages, and is almost the only means that can prevent them from being corrupted and debased"†.

"In those plans of education of which the study of the dead languages does not make a part, proper means are seldom adopted for impressing the youthful mind with habits of industry: nor do the judgment, the memory, and the other powers of the mind, receive equal improvement, as they pass not through the same exercises as in a classical education. Let us enter those academies where the way to a complete education leads not through the thorny and rugged paths of classical literature; let us attend to the exercises which the polite teachers cause their pupils to perform. Do they insist on laborious industry or intense application? No: they can communicate knowledge without requiring laborious study. They profess to allow their pupils to enjoy the sweets of idleness; and yet render them prodigies of learning. Hence, when their pupils come to enter the world, and engage in the duties of active life, they appear destitute of every manly qualification. Though they have attained the age, and grown up to the size of manhood, their understandings are still childish and feeble; they are capricious, unsteady, incapable of industry or fortitude, and unable to pursue any particular object with keen, unremitting perseverance. That long series of study and regular application which is requisite to attain skill in the ancient languages, produces much sippier effects on the youthful mind. The power of habit is universally felt and acknowledged. As he who is permitted to trifle away the earliest part of his life in idleness, or in frivolous occupations, can scarce be expected to display any manly or vigorous qualities when he reaches a more mature age: so, on the contrary, he whose earlier days have been employed in exercising his memory, and furnishing it with valuable treasures, in cultivating his judgment and reasoning powers, by calling the one to make frequent distinctions between various objects, and the other to deduce many inferences from the comparison of the various objects presented to the understanding, and this in strengthening and improving the acuteness of his moral powers, by attending to human actions and characters, and distinguishing between them, as virtuous or vicious, as mean or glorious; he who has thus cultivated his powers, may be naturally expected to distinguish himself when he

comes to perform his part in active life, by prudence, activity, firmness, perseverance, and most of the other noble qualities which can adorn human character. But in the course of a classical education, the powers of the mind receive the cultivation; and therefore these happy effects may be expected to follow from it. The repetitions which are required afford improving exercise to the memory, and store it with the most valuable treasures: the powers of the understanding are employed in observing the distinctions between words; in tracing words to the substances and qualities in nature which they are used to represent; in comparing the words and idioms of different languages, and in tracing the laws of the analogy and construction; while our moral faculties are at the same time improved, by attending to the characters which are described, and the events and actions which are related, in those books which we are directed to peruse in order to acquire the ancient languages. We assert therefore that the study of the ancient languages is particularly useful for improving and strengthening the powers of the mind; and, by that means for preparing us to act our part in life in a becoming manner."

SECT. XV. Of the Education proper for the FAIR SEX.

MOST of the preceding observations and directions are applicable to the education of children both sexes. As the fair sex, however, at a certain period of life, require a different mode of education from that of boys, we shall, in addition to the abstract already given from Dr CHAPMAN's Treatise, (PART I, SECT. VII.) quote the sentiments of Mr HERON upon this important subject from the *Encyclopædia Britannica*; offering at the same time such remarks as seem necessary, upon those passages, wherein we do not entirely agree with him.—"As there is a natural difference (says he,) in the characters of the two sexes, as there are certain duties peculiar to each; it is easy to see, that the education of the boy and that of the girl cannot, ought not, to be conducted precisely in the same manner. As since the duties of the female sex are so important to society, and they form so considerable a part of our species; their education, therefore, merits the highest attention.

"In infancy, the instincts, the dispositions, and the faculties of boys and girls seem to be nearly the same. They discover the same curiosity, and the same disposition to activity. For a while they are fond of the same sports and amusements. They play and by, when we begin to make a distinction in their dress; when the girl begins to be confined to a sedentary life under her mother's eye, while the boys are permitted to ramble about without doors; the distinction between their characters begins to be formed, and their taste and manners begin to become different. The

† Here we cannot help observing, that the different causes above-mentioned seem already to have begun to operate in corrupting and debasing the English language in no small degree, as has been pointed out by great names, by the late professor Beattie, in his posthumous Essays. See BEATTIE, § 2, and various articles there referred to.

now imitates the arts and the active amusements of his father; digs and plants a little garden, builds a house in miniature, shoots his bow, or draws his little cart; while the girl, with no less emulation, imitates her mother, knits, sews, and dresses her doll. They are no longer merely children: the one is now a girl; the other a boy. This taste for female arts, which the girl so easily and naturally acquires, has been judiciously taken notice of by Rousseau, as affording an happy opportunity for instructing her in a very considerable part of those arts which it is proper to teach her. While the girl is busied in adorning her doll, the industry becomes expert at needle-work, and learns how to adjust her own dress in a becoming manner. And therefore, if she be kindly treated; it will not be a matter of difficulty to prevail with her to apply to these branches of female education. Her mother or governess, if capable of managing her with mildness and prudence, may teach her to read with great facility. For being already more disposed to sedentary application than the boys of the same age, the confinement to which she must submit in order to learn to read will be less irksome to her. Some have pretended that the reasoning powers of girls begin to exert themselves sooner than those of boys. But, as we have already declared our opinion, that the reasoning powers of children of both sexes begin to display themselves at a very early period; so we do not believe that those of the one sex begin to appear, or attain maturity, sooner than those of the other. But the different occupations and amusements in which we cause them to engage from their earliest years, naturally call forth their powers in different manners, and perhaps cause the one to imitate our modes of speaking and behaviour sooner than the other. However, as we with both boys and girls to learn the art of reading at a very early age, even as soon as they are capable of any serious application; so we with girls to be taught the art of writing, arithmetic, and the principles of religion and morals, in the same order in which these are inculcated on boys.

* We need not point out the reasons which induce us to regard these as accomplishments proper for the female sex: they seem to be generally considered as not only suitable, but necessary. It is a most important privilege, as beings placed in a situation different from that of the inferior animals, that we are capable of religious sentiments and religious knowledge; it therefore becomes us to communicate religious instruction with no less assiduity and care to the youth of the female sex than to those of our own. Besides, as the care of children during their earlier years belongs in a particular manner to the mother; she, therefore, whose nature has destined to the important duties of a mother, ought to be carefully prepared for the proper discharge of those duties, by being accurately instructed in her youth, in such things as it will be afterwards requisite for her to teach her children.

* Ladies have sometimes distinguished themselves as prodigies of learning. Many of the most eminent geniuses of the French nation have been of the female sex. Several of our countrywomen have made a respectable figure in the republic

of letters. Yet we cannot approve of giving girls a learned education."

We agree with Mr Heron, that a learned education would be not only improper but useless to the greater part of the fair sex. But if a young lady shall exhibit proofs of uncommon abilities, and of a strong propensity to literature, we think it would be a piece of injustice to the public, as well as to the individual, to crush her rising genius by not giving her every branch of education, that she should show the smallest inclination for. If the parents of such a female genius be in affluent circumstances, we hesitate not to say, it is a duty incumbent on them, to encourage and assist their daughter in following nature. Many of the fair sex; it is well known, in all ranks of life, are never married: If such should be the fate of the superior genius we have supposed, an education qualifying her only for domestic utility would be lost upon her; whereas by giving her a complete education in every branch of literature, she would be enabled to spend her time and fortune in a manner agreeable to herself and useful to the public. If, on the other hand, she should happen to be married, she would prove the more agreeable companion to a man of sense and learning. In short, if female genius were more encouraged by those who have it in their power, a female author would not be such a *rara avis* in the republic of letters; ladies of abilities would apply themselves to subjects of more importance than novel-writing; and Madam Dacier's, Macaulays, and Wolstonecrafts, would appear much more frequently in every civilized country.

Excepting in such cases, however, where strong marks of uncommon genius appear, we agree with Mr Heron, that "to acquire the accomplishments which are more proper for their sex, will afford sufficient employment for the earlier years" of the majority of young women. "If they be instructed in the grammar of their mother tongue, and taught to read and speak it with propriety; be taught to write a fair hand, and to perform with readiness the most useful operations of arithmetic: if they be instructed in the nature of the duties which they owe to God, to themselves, and to society; this will be almost all the literary instruction necessary for them. Yet we do not mean to forbid them an acquaintance with the literature of their country. The periodical writers, who have taught all the duties of morality, the decencies of life, and the principles of taste, in so elegant and pleasing a manner, may with great propriety be put into the hands of our female pupil. Neither will we deny her the historians, the most popular voyages and travels, and such of our British poets as may be put into her hands without corrupting her heart or inflaming her passions. But could our opinion or advice have so much influence, we would endeavour to persuade our countrymen and countrywomen to banish from among them the seditious, those panders of vice, with no less determined severity than that with which Plato excludes the poets from his republic, or that with which the converts to Christianity, mentioned in the Acts, condemned their magical volumes to the flames. Unhappily, novels and plays are almost the only pe-

gies of reading in which the young people of the present age take delight; and nothing has contributed more effectually to bring on that dissoluteness of manners which prevails among all ranks."

Here again we cannot help differing from Mr Heron. Many causes have contributed much more to the prevailing dissoluteness of manners, than the reading of novels and plays, or even seeing the latter acted. We shall mention but one, which, indeed is a principal cause—the general prevalence of infidelity. Religion is the best preservative of female virtue. A sense of honour and reputation is but a weak barrier for female chastity, if a firm faith in the principles of Christianity is wanting. It is an undeniable fact, that since the sceptical writings of Voltaire and Hume came to be read with approbation among people of both sexes in the superior ranks, the number of divorces and prosecutions for *crim. con.* have multiplied amazingly. And with regard to the lower ranks of women, the want of a proper education, and the consequent want of all principle, either of religion or honour, (not to add the difficulty of living—that great bar to early marriage, which is the surest antidote against debauchery) sufficiently accounts for the dissoluteness that appears among that class.

We deny not, however, that novels and plays have also been prejudicial to female morality, but even these ought not to be condemned by wholesale. Many well wrote novels, instead of having such a tendency, have the very opposite, and are highly friendly to female virtue. A young person of either sex must be far gone in habits of vice, who is not improved by reading such novels as those of Richardson, Brookes, and many others; which can hardly be read even by the most vicious, without exciting them to feel a momentary wish for reformation. And young women, even of the lowest class, may be confirmed and strengthened in their resolutions of virtue, by reading such novels as *Pamela*. In short the duty of parents and teachers on this point seems to be, not to prohibit young people entirely from reading novels and plays, but to direct their taste and choice to the best, and prevent them from reading those of an immoral tendency. Children show a fondness for this species of entertainment, from their earliest years, when they first listen with attention to the tales of their nurses, which are only so many novels in miniature. This taste, so early contracted, may be taken hold of by parents and teachers, to lead them to the study of biography and history; but even these, though proper and necessary branches of education, we will venture to affirm, do not tend so much to the improvement of the mind, as a well wrote novel. History and biography show us what mankind are, and such a shocking series of crimes and cruelties does the former at least exhibit, as is sufficient almost to make a young person a *misanthrope*, if it does not lead to the dangerous conclusion, that virtue, however much recommended in theory has been very little regarded in practice by the majority of the species, even of the highest ranks, in all ages. But a well wrote novel shows us what mankind *may* and *ought* to be, and therefore is much more likely to impress upon the minds of

young persons, a love of every virtue, and a strong resolution to practise it. In a word, the greater danger we apprehend to arise from allowing young persons to read novels, is, that, like all other habits, contracted from the mere pleasure of *immediate gratification*, they may intoxicate the minds so far, as to lead them to spend too much time upon them, and consequently neglect other and more necessary pieces of improvement. On this account teachers and guardians should endeavour to limit the time allowed to young ladies this amusement, and instead of prohibiting young ladies from reading novels, they should rather turn their propensity to this species of entertainment as a stimulus to make them go cheerfully through their other tasks, by promising to indulge them with a new and well wrote novel, after such task is finished.

We have enlarged the more upon this subject because it has become common and even popular with many writers, to condemn all novels without distinction, as improper books for young women;—in consequence of which they are led to procure them by stealth without discrimination, and to read them at improper hours, to the prejudice of their health as well as their morals. Whereas, if they were allowed and advised to read only the best, and proper time allotted this indulgence, they would be under no temptation or danger. We have said the less upon plays, that they are not so generally condemned, although perhaps many of them deserve to be so, as much as the worst of novels. But to turn to Mr Heron, who seems willing to induce young ladies to a certain degree:

"We will not discover so much austerity, (I say) as to express a wish that the education of female sex should be confined solely to such things as are plain and useful. We forbid not those compliments which are merely ornamental, the design of which is to render them amiable to the eyes of the other sex. When we consider the duties for which they are destined by nature, we find that the art of pleasing constitutes no inconsiderable part of these; and it would be wrong therefore, to deny them those arts, the end of which is to enable them to please. Let them endeavour to acquire taste in dress: to dress in a neat graceful manner, to suit colours to her complexion, and the figure of her clothes to her shape: is no small accomplishment for a young woman. She who is rigged out by the taste and dexterity of her maid and her milliner, is nothing better than a doll sent abroad to public places as a sample of their handiwork. Dancing is a favourite exercise; nay, we might almost call it the favourite study of the fair sex: So many pleasing images are associated with the idea of dancing; dress, tendance, balls, elegance and grace of motion, listible, admiration, and courtship: and these are early inculcated on the young ladies by mothers and maids, that we need not be surprised if little girls consider her lesson of dancing as a matter of more importance than either her book or sang. And indeed, though the public in general seem to place too high a value on dancing; though the undue estimation which is paid to it seems owing to that taste for dissipation, and

range for public amusements, which naturally prevail amid such refinement and opulence; yet still dancing is an accomplishment which both sexes may cultivate with considerable advantage. It has a happy effect on the figure, the air, and the carriage; and we know not if it be not favourable even to dignity of mind: Yet, as, to be even a first-rate poet or painter, and to value himself on his genius in these arts, would be no real ornament to the character of a great monarch; so any very superior skill in dancing must serve rather to disgrace than to adorn the lady or the gentleman. There are some arts in which, though a moderate degree of skill may be useful or ornamental, yet superior taste and knowledge are rather hurtful, as they have a tendency to seduce us from the more important duties which we owe to ourselves and to society. Of those, dancing seems to be one: It is said of a certain Roman lady, by an eloquent historian, "that she was more skilled in dancing than became a modest and virtuous woman."

"Music, also, is an art in which the youth of the female sex are pretty generally instructed; and if their voice and ear be such as to enable them to attain any excellence in vocal music, it may conduce greatly to increase their influence over our sex, and may afford a pleasing and elegant amusement to their leisure hours. The harpichord and the spinnet are instruments often touched by female hands; nor do we presume to forbid the ladies to exercise their delicate fingers in calling forth the enchanting sounds of these instruments. But still, if your daughter have no voice or ear for music, compel her not to apply to it.

"Drawing is another accomplishment which generally enters into the plan of female education. Girls are usually taught to aim at some scratches with a pencil: but when they grow up, they either lay it totally aside, or else apply to it with so much assiduity as to neglect their more important duties. We do not consider skill in drawing, any more than skill in poetry, as an accomplishment very necessary for the ladies; yet we agree with Rousseau, that as far as it can contribute to improve their taste in dress, it may not be improper for them to pursue it. They may very properly be taught to sketch and colour flowers; but we do not wish them to forget or lay aside this as soon as the drawing-master is dismissed: let them retain it to be useful through life. Though pride can never be lovely, even in the fairest female form; yet ought the young woman to be carefully impressed with a due respect for herself. She will join with her native modesty to be the guardian of her virtue, and to preserve her from every bad impropriety of conduct."

SECT. XVI. *Of the EDUCATION of BOYS from ELEVEN to FIFTEEN YEARS of AGE inclusive.*

As during this period, the mind as well as the body is approaching to maturity, the vigour of both will be improved by exercising them. History, biography, oratory, fables, and poetry, formerly improper may now be studied with advantage. And the pupil while he is studying the classics may be carried forward from vulgar to decimal arithmetic; and from thence to the practical

branches of mathematics. In all of these, as well as in every other branch of learning, what he is taught will be best remembered and most thoroughly understood, if he is afforded a few opportunities of applying his lessons to real use in life. Geometry and geography are two most important branches of education; but are often taught in such a manner, that no real benefit is derived from the knowledge of them. The means which M. Rousseau proposes for initiating young people in these, and in several other of the arts and sciences, are by no means unworthy of the attention of teachers; at least they appear to be more practicable than many other parts of his plan. We shall therefore quote his method in our next section. Mean time while boys are engaged in these and in the languages, they should also attend to and cultivate the bodily exercises; such as dancing, fencing, and horsemanship. Each of these is almost absolutely necessary for one who is designed to have intercourse with the world; and besides, they have a tendency to render the powers of the body active and vigorous, and even to add new courage and firmness to the mind. And here it may not be improper to mention an art too much neglected, but very properly recommended by M. Rousseau, as proper to be taught boys, viz. SWIMMING.

"In a particular or exclusive method of education, calculated only to distinguish persons so educated from the vulgar, those instructions are always preferred which are the most costly; while the more common, which by the way are the most useful, are neglected. Thus young gentlemen politely educated go through the exercises of the riding-school, because this course is expensive; but hardly any of them learn to swim, because it costs nothing, and a common peasant may know how to swim as well as the first lord in the land. And yet we see the traveller, without having learned to ride the great horse, mounts his nag, and manages him very well; but whoever falls into the water and cannot swim, must be drowned: and nobody can swim without having learned it. Besides, we know not that any one is obliged on pain of death to ride on horseback; whereas no one is certain of avoiding the danger, to which we are so often exposed, from the water. Our pupil shall learn to move in the water, as well as on land. Why should he not be taught to live in all elements? Could he be taught to fly in the air, he should be an eagle; and, if to bear the fire, a salamander.

"We are generally afraid children should drown themselves in learning to swim; but whether they drown themselves in learning, or are drowned when they have grown up for having never learned, it is the fault of those who have the care of them, when young. It is vanity only that inspires temerity; we are never fool-hardy, or run ourselves in danger, when alone; nor would a well-educated child be so, though the eyes of the whole universe were upon him. As exercise does not depend on running into danger, he might learn, in the canal of his father's park, to cross the Hellespont; but it is necessary to familiarise him in some degree to danger itself, that he may not be over-solicitous about it."

When the pupil has acquired some knowledge of his own and of the learned languages, has gained some skill in arithmetic and practical mathematics, or even before this time, it will be proper to begin him to the practice of composition. Themes, versions, and letters, the first exercises in composition which the boy is usually required to perform, do not seem well calculated for leading him to acquire the power of expressing himself with ease and elegance. We agree with Mr Heron that other subjects might be proposed which would conduce more effectually to the end in view. The curiosity of children is extremely active, and every new object powerfully attracts their regard: but they cannot view any object without taking notice of its most obvious qualities; of any animal, for instance, without taking notice of its shape, its colour, its seeming mildness or ferocity; and they are generally pretty ready to give an account of any thing extraordinary which they have observed. How easy then would it be to require them to write down an account of any new object exposed to their observation? The task would not be difficult; and every new piece of composition which they presented to us would add so much to their knowledge of nature. We might even require such specimens of their accuracy of observations and skill in language, at times when they enjoyed no opportunities of beholding new or surprising objects; a tree, a flower, a field, a house, an animal, any other simple object, should be the subject of their exercise. After some time, we might require them to describe something more various and complex. They might give an account of several objects placed in a relative situation; as, a stream, and the vale through which it flows; or, a bird, and the manner in which it constructs its nest; or, of one object successively assuming various appearances, as the bud, the flower, the apple. Human actions are daily exposed to their observation, and powerfully attract their attention. By and by, therefore, their task should be to describe some action which had lately passed in their presence. We need not pursue this hint farther; but we are persuaded, young people might, by these means, sooner, and much more certainly, be taught to express themselves with ease and correctness in writing, than by any of the exercises which they are generally made to perform with that view. They would likewise acquire much more real knowledge. The study of words would then be rendered truly subservient to their acquiring a knowledge of things.

It will not be expected, that we should descend to every particular of that series of education, in which a boy may be engaged from that period when he first becomes capable of serious application, till he reach the age of puberty.

The above hints will be sufficient to show in general, in what manner the youth's education ought to be conducted during this period. Let the parent and the tutor bear in mind, that much depends on their example, with regard to the dispositions and manners of the youth; and let them carefully strive to form him to gentleness, to firmness, to patient industry, and to vigorous courage: let them, if possible, keep him at a distance from that contagion with which the evil example of

worthless servants and play-fellows might infect him. Now is the time for cultivating those seeds of piety and virtue formerly sown, so that they may now grow up, and bear fruit in future life.

SECT. XVII. M. ROUSSEAU'S METHOD of teaching GEOMETRY.

"It has been said, (this celebrated author marks) that geometry is above the capacity of children; but that it is so is our own fault. We do not perceive that their method is not our and that what is the art of reasoning in us, is nothing more than the art of perceiving in them. Instead of teaching them, therefore, *our* method we ought to study *theirs*. For our way of learning geometry is as much an affair of the imagination, as of reasoning. When once the proposition is laid down, we set about conceiving the demonstration of it; that is, we endeavour to find from what proposition already known, the other is a necessary consequence; and from the consequences which may be drawn from *such* proposition, to fix on that which is precisely sought.

"By this method, however, the most exact reasoner in the world, unless he is also possessed of invention, must soon be obliged to stop short. And what is the consequence? Instead of being instructed to trace out demonstrations, we only receive those which are dictated to us; instead of being taught to reason, the master reasons for us and exercises only our memories.

"If you cut out and form exact geometric figures, combine them, place them one upon another, and examine their relations, you will soon make yourself master of the elements of geometry; without ever troubling yourself about definitions, problems, or any other theoretical mode of demonstration. We will not therefore pretend to teach our pupil geometry; but so contrive matters that he shall teach it us. Search for the proper relations, but let him find them; which I will the more easily do, as you look for them merely with that view. Instead of taking a pair of compasses, for example, to describe a circle you should do it with a piece of thread, turning on a point. By which means, when you come afterwards to compare the length of the different radii of such a circle, your pupil will naturally laugh at your simplicity, and give you to understand, that the same thread being constantly extended from the centre, in tracing the periphery it is impossible that all the parts of the latter should not be at equal distances from the former.

"If you are desirous of measuring an angle of 60 degrees, describe not only a segment, but the whole circle; for with children nothing should be left to supposition. By doing thus, you find that the segment bounded by the two sides of the angle is just a 6th part of the whole circle. After this keep the point of the compasses in the same centre, describe a second circle; of which you will find the segment to be also a sixth part of the whole, as before: then describe a third, and so go on with describing concentric circles, and measuring the angle on each, till your pupil, struck with your stupidity, shall inform you, that, whether the arch be greater or less, the same angle will be always the 6th part of a circle. By this example

example alone your pupil would become perfectly acquainted with the use of a protractor.

"To prove that the three angles of a triangle are equal to two right angles, they are usually described in a circle. On the contrary, you should contrive it, that your pupil should first observe this in the circle itself; when you would observe to him that, if the circle were rubbed out, and the right lines only remained, the angles would remain still the same.

"It is common to neglect the nicety of geometrical figures, as they are supposed perfect in the demonstration. But as we shall never trouble ourselves about demonstrations, our most important concern will be to draw our figures exactly; to make a square as perfectly square, and a circle as completely round, as possible. To prove the accuracy of the figure, we should examine it by all its perceptible properties, and this would give us every day an opportunity of discovering new ones. We should compare the two halves of a circle, by folding it together in the line of its diameter; and of those of a square, by doubling it in that of its diagonal. We should dispute whether the equality observable in the circle and square thus folded, obtained also in the parallelogram, the trapezium, and other figures. Sometimes also, we should attempt to foresee the success of the experiment, before we made it; to endeavour to assign the reasons, &c.

"This geometry would be, to our pupil, only the art of using the scale and compass; nor should he ever be suffered to confound it with the art of design, in prosecuting which he should use neither of these instruments. These indeed should be always kept under lock and key; lest by their frequent use he acquire a slovenly way of sketching his designs: we should, however, frequently take out our drawings in our excursions and discourse on what we had done, or might design to do, at our return."

SECT. XVIII. M. ROUSSEAU'S METHOD of teaching GEOGRAPHY, and ASTRONOMY.

"You intend (says M. Rousseau) to teach your child geography, and for that purpose provide for him maps, spheres, and globes. What an apparatus! wherefore all these mere representations of things? why do you not rather begin by shewing him the object itself, that he may, at least, know what it is you are talking about?

"Walk out with him, some fine evening, to a convenient spot, from whence an extensive horizon may give you a full view of the setting sun; and then take particular notice of such objects as meet the place of its going down. Return the next morning, with a professed design only of taking the fresh air, to the same place, before the sun rises. There you will see the fiery rays it scatters among the clouds, as harbingers of its approach. The illumination increases, the east seems all in flames, and you expect the glorious orb long before it discovers itself above the horizon; you think you see it every moment; it at length appears. Its rays dart like lightning over the face of nature, and darkness vanishes at the sight. A pure, unobscured agreeable to our maxims, and accompanied receive no assistance till he has discovered

his own abilities, will examine every new object with a long and silent attention. He will be thoughtful without asking questions. Content yourself, therefore, with presenting proper objects opportunely to his notice, and when you see they have sufficiently excited his curiosity, drop some leading laconic questions, which may put him in the way of discovering the truth.

"On the present occasion, having for some time contemplated the rising sun, and made your pupil observe the hills and other neighbouring objects on that side, permitting him the while to talk about them without interruption, stand silent a few moments, and affect a profound meditation. You may then address him thus: "I am thinking that, when the sun set last night, it went down yonder behind us; whereas, this morning, you see, he is risen on the opposite side of the plain here, before us. What can be the meaning of this?" Say nothing more; and, if he asks you any thing about it, divert his attention, for the present, by talking of something else. Leave him to reflect on it himself, and be assured he will think of your observation.

"To accustom a child to give attention to objects, and to make sensible truths appear striking to his imagination, it is necessary to keep him some time in suspense before they are explained or discovered to him. If he should not sufficiently comprehend the nature of the present question by the means proposed, it may be rendered still more obvious, by diversifying the terms of it. If he cannot comprehend in what manner the sun proceeds from its setting to its rising, he knows at least how it proceeds from its rising to its setting: he hath ocular information of this. Explain the first question, then, by the second; and if your pupil be not extremely dull indeed, the analogy is too obvious to escape him. Such is our first lecture in *cosmography*.

"As we proceed slowly from one sensible idea to another, making ourselves familiarly acquainted with each as we go on, and as our pupil's attention is never required upon compulsion, the distance will be very considerable, from the object of this first lesson to the knowledge of the sun's course, and the figure of the earth: but as the apparent motion of all the heavenly bodies depends on the same principle, and as the first observation naturally leads to all the rest, it requires less capacity, though more time, to proceed from the diurnal rotation of the earth to the calculation of an eclipse, than to acquire clear ideas of the phenomenon of day and night.

"As the sun turns round the earth, he describes a circle, and every circle hath a centre; this we already know. This centre, also must needs be invisible, because it is in the middle of our globe; but we can suppose two points on the surface to correspond with it, that a road passing through all three, and extended both ways to the heavens, would be at once the axis of the earth and of the sun's apparent diurnal motion. A whirl-bone or globular totum, turning upon one of its points, may serve to represent the heavens turning upon their axis, the two points of this plaything being the two poles; one of which may be pointed out to our pupil, near the tail of the little bear. This

would furnish us with an amusement for the night; by which means we should become gradually acquainted with the stars, and thence in time grow anxious to distinguish the planets and constellations.

"You and your pupil have seen the sun rise at *midsummer*: next take a view of his rising, some fine morning in the depth of *winter*. We will suppose you have taken care to make the second observation on the *very same spot* where you made the former; so that, in consequence of a little preparatory discourse to introduce the remark, one or other of you will infallibly cry out when the sun first appears before the horizon, "Ha! this is pleasant enough! the sun does not rise in the place it used to do. Here, you see, are our old marks to the left, and now he rises yonder, to the right. So it seems there is one east for the summer, and another for the winter." These examples will be sufficient to shew the inexperienced preceptor the way to bring his pupil acquainted with the sphere, by making use of *the earth itself* instead of a globe, and the *apparent revolution of the sun* instead of any imperfect representation of it. It ought, indeed, to be laid down as a general rule, never to substitute the shadow unless where it is impossible to exhibit the substance; for the representation ingrossing the attention of the child, generally makes him forget the object represented.

"We never know how to suppose ourselves in the place of children; we never enter into their manner of thinking. On the contrary, we attribute to them *our* ideas; and, pursuing *our own* method of argumentation, fill their heads, even while we are discussing incontestable truths, with extravagance and error.—In teaching him geography, for example, we should begin at its two extremes; and, with the study of the apparent astronomical revolutions, unite that of the divisions and measurement of the earth. While he is studying the sphere, and thus transporting himself in imagination to the heavens, we should call back his attention to the divisions of the earth, and point out to him their relation to his own place of abode.

"The two first objects of his geographical studies should be the town where he resides, and his father's seat in the country. After having well-observed the situation of these, he should take the like notice of the neighbouring villages and country-seats on the road, together with the adjacent rivers; observing the situation and aspect of each object, in regard to the rising and setting of the sun. This is the point of reunion. He should make a map from this survey; beginning simply with the two first objects before mentioned, and inserting the others by degrees, as he comes to know, or estimates their position and distance. You see, already, the advantages he will have in this respect, by having accustomed him to measure objects and distances by his eye.

"Notwithstanding this advantage, however, it will be necessary to direct a child in these operations a little; but this should be very little and imperceptibly. If he falls into a mistake, let him alone. Be in no haste to set him right; but wait with patience till he be himself in a state to discover and correct his error; or at most take occasion

only, at a favourable opportunity, by some distant hint, to make him sensible of it. If he should never mistake, he would make but little improvement. It is not necessary that he should know present the topography of the country, but it means whereby such knowledge is obtained; it is of no importance to him to have a number of miles in his head, provided he knows what they signify to represent.—Explanatory discourses are by no means advisable: young people give little attention to them, and never retain them in memory. *The things themselves* are the best explanation. It can never enough be repeated, that *we must avoid words of too much consequence*; with our present modes of education, we make nothing but prate.

"Let us suppose that, while I am studying with my pupil the course of the sun, and the method of its returning to the east, he should stop me short, by asking me to what purpose all this? What a florid discourse might I not make him, in answer to such a question? What a number of fine things might I not take occasion to patiate on, by the way, particularly if there were any witnesses to our conversation? I might tell him of the utility of travelling, the advantages of commerce, the produce peculiar to every climate; of the manners of different nations, of the use of the calendar, of the computations of returning seasons for agriculture, of the art of navigation, and the manner of conducting a ship to sea. Politics, natural history, astronomy, and morality itself, with the laws of nations, might be introduced in the course of my harangue; and a view to give my pupil great ideas of the sciences, and to excite in him a desire to study them. What I had done, however, I should only have been proposing my own pedantry, without my pupil's having comprehended one single thing I had been talking about. He would have still a great deal to ask me, as before, to what end the sun returned to the east, but that he would be fearful of fending. He would therefore find his account in pretending to understand what he was thus compelled to hear. This is the practice carried on in polite education. Our *Emilius*, however, brought up in greater rusticity, and so difficult of comprehension, will listen to nothing of all this. At the very first word he might not understand, he would turn away and play about the room, leaving me to finish my oration by myself. We must find, therefore, some more obvious solution: this scientific method of explication being useless to him.

"We were observing the position of the sun to the north of Montmorenci, when he interrupted me with this impertinent question, of what end is all this? On which, I answer, "You are in the right; we must think of this matter leisure; and if we find this inquiry is useless, we will drop it, for we have no need of useless amusements." We then betake ourselves to some other employment, and talk no more of geography during the rest of the day.

"I propose to him next morning a walk before breakfast: he likes nothing better; children in general are very ready for running about, and it is fit for exercise. We enter the forest, traverse the country, and rambling about till we are almost tired, we lose ourselves, and know not which way

to reach home. Our time is spent; the heat of the day increases; we begin to grow hungry, and wander about from one place to another, among copses, woods, and quarries, without meeting with any object we are acquainted with. At length, over-taken, famished, fatigued, we find ourselves only more and more bewildered. We sit down, therefore, to rest ourselves and deliberate on what is to be done. Supposing my pupil to have been educated like another child, he does not deliberate about the matter, but sits down and begins to cry; ignorant that we are just by the gate of Montmorenci, which is concealed from us only by the trees of a narrow coppice: these trees, however, appear an impenetrable forest to him; such a little gentleman as he, lost in the bushes. After some few minutes passed in silence, I say to him, with an air of disquietude, What shall we do, my dear Emilius, to get out of this forest?

*EMILIUS (*all in a sweat, with the tears running down his cheeks*). I know not: I am so weary, so hungry, so dry, I know not what to do.

*ROUSSEAU. Do you think I am in a better situation than you; or that I should not cry too, if I could breakfast upon tears? Our business is not to weep, but to look about us. Look at your watch; what is it o'clock?

*EMIL. It is noon, and I have not yet breakfasted.

*ROUSS. It is very true; it is noon, and I am fasting too.

*EMIL. You must then, surely, be very hungry.

*ROUSS. Yes; but the worst on it is, my dinner will not come here to find me. Let me see—it is noon; that is precisely the time at which we observed yesterday the situation of this forest from Montmorenci: if we could but observe in like manner the position of Montmorenci from this forest—

*EMIL. True, but yesterday we saw the forest, and we cannot from hence see the town.

*ROUSS. That is our very misfortune.—If we could, by any means, but find its situation out without seeing it—

*EMIL. O, my good friend! but how?

*ROUSS. Did we not observe that the forest lay—

*EMIL. To the north of Montmorenci.

*ROUSS. Montmorenci therefore should be—

*EMIL. To the south of the forest.

*ROUSS. We have a method to find out the direction at noon.

*EMIL. We have so, by the direction of our shadow.

*ROUSS. But as for the south.

*EMIL. How shall we find that?

*ROUSS. The south is always opposite to the north.

*EMIL. That is true; we have only to take the direction contrary to our shadows: here, this must be to the south. Montmorenci must lie on this side: let us go this way.

*ROUSS. You may possibly be in the right; but, let us take this path through the wood.

*EMILIUS (*clapping his hands and shouting for joy*). Ah! I see Montmorenci directly before us. Come along, let us go to breakfast, to dinner, to make haste: astronomy, I see is good for nothing.

“Observe that if he does not actually make use of this latter expression, he will think so; it does not signify which, provided I do not teach it him. You may be assured, also, he never will forget this day’s lesson as long as he lives; whereas, had I only supposed this adventure in my chamber, all that I could have said on it would have been forgotten the next day. For this reason we ought to inculcate all we possibly can by *actions*, and to say only what we cannot do.”

SECT. XIX. *Of the VANITY natural to YOUNG PERSONS, with a SPECIMEN of M. ROUSSEAU’S METHOD OF CURE.*

The following picture of the effects of vanity in young persons, upon the acquisition of certain degrees of knowledge, may be useful as well as entertaining to our readers. “My pupil,” says M. Rouffcau, “has long since observed, that amber, glass, wax, and several other bodies, on being rubbed, attract bits of straw, feathers, &c. and that other bodies in general have not that quality. Among them, however, we have accidentally discovered one, which is possessed of a yet more singular property: it attracts steel filings and bits of iron, not only at a distance, but without friction. This discovery engages our attention for some time, without answering any other purpose than amusement. At length, we perceive it communicates its attractive property to iron and steel. About this time, I take my pupil to see the diversions of a neighbouring fair, where, among other wonderful performances, a juggler produces a duck of wax, swimming about in a basin after a piece of bread, which he holds in his hand. We are greatly surprised at this strange phenomenon; but as we are unacquainted with the fables of witchcraft, we charge not the artist with being a wizard or a conjuror. As we are daily accustomed to various striking effects, of whose causes we are confessedly ignorant, we are not very anxious to account for every thing we see; but rest contented till some fortunate event affords us information.

“At our return home, however, our conversation very naturally turns on this extraordinary duck, and accordingly a thought suggests itself of imitating it. We take a large needle, and touching it on a loadstone, cover it with wax, which we mould as well as we can into the shape of a duck, the needle passing through its body from the beak to the tail. We then set it afloat in a basin of water, and presenting a key to its beak, we find, to our great joy, the duck follows it, in the same manner as that of the juggler followed the bread. As to the line of direction in which the body of the duck remains when at rest, we may observe that some other time; at present we are too much taken up with the first object of attention to think of any thing else. In the evening we repair to the juggler’s booth, with a piece of bread, properly prepared, in our pocket; when the boasting artist having performed his trick, my young philosopher, who had with difficulty so long contained himself, tells him, there is nothing in it, and that he himself can do as much. He is taken at his word; and instantly pulls the bread with the

the concealed iron out of his pocket. His heart flutters as he approaches the table, and his hand trembles as he presents the bread. The duck, however, follows it; on which he leaps for joy, and triumphs in the applause of the spectators. The juggler, though a little confounded, embraces him, felicitates him on his success, and begs he will honour him with his presence the next day, when he promises to collect a more numerous assembly to witness and applaud his abilities. Our young naturalist, in the mean while, so proud of his science, is just on the point of discovering the secret, when I hurry him away from the scene.

"Full of the applause he is to receive to-morrow, he counts the moments, in the mean time, with ridiculous impatience. He invites every one he knows, and would be glad the whole world should be witnesses of his triumph. At length the appointed hour is come; we hasten to the place of rendezvous, and find the room already crowded with spectators. His young heart is elated with joy at the sight. Other tricks in their course preceding ours, the juggler surpasses his usual dexterity, and performs wonders. My pupil, however, pays no attention to what is doing; but keeps fumbling all the while in his pocket, with his piece of bread in his hand, fetching his breath short, and sweating with impatience and anxiety. At length it is his turn to exhibit: the artist pompously introduces the apparatus, and prepares the spectators for the trick. Emilius, though somewhat abashed, approaches the table, and offering his bread to the duck—what a new turn in human affairs: Tame as it was yesterday, it is become a mere wild duck to-day; instead of presenting its beak, it turns tail and swims away, flying from the bread, and the hand presenting it, as fast as it before had followed them. After many fruitless trials, for which he is constantly laughed at by the company, my pupil complains that he is imposed on, and that this is not the duck he practised on yesterday; defying the juggler himself to draw this about in the same manner.

"The artist, without making a reply, takes up a piece of bread, and presenting it to the duck, draws it immediately after his hand. Emilius takes up the same piece of bread; but, instead of succeeding better than with the former, has the mortification to see the duck turn regardless from him, and make circles round the basin. On this he retires in confusion, unable to bear the sneers of the company any longer.

"The juggler now takes the piece of bread my pupil had brought, and makes use of it with as much success as he did his own. He takes the iron from within it; and exposing it to the company, raises another laugh at our expence. He even draws the duck about, as before, with the bread thus separated from the iron. He performs the same trick, also, with another piece, cut from the loaf by a third person; he does the same thing with his glove, and with the bare end of his finger. He next advances into the middle of the room, and declaring aloud, with that emphatic tone so peculiar to these gentry, that his duck would obey his call, as well as his motions; he speaks to it, and it immediately obeys the word of command. If he bids it move to the right, to the right it

goes; if to return, it returns; if to turn about it turns; its motion constantly obedient his order. The repeated shouts of applause follow these specimens of his art, are so many sultry upon us; we therefore privately slip on and make the best of our way home, shut ourselves up in our apartment, instead of going about, we had projected, to tell every body of our success.

"The next morning somebody knocks at door; who should this be but our friend the juggler? He enters, and modestly complains of conduct; he cannot think what he has done us, that we should endeavour to discredit his art, and deprive him of his bread; or that there is something so very wonderful in the art of drawing about a duck of wax, that we should be ambitious of that honour, at the expence of a poor man's subsistence. 'Faith, Gentlemen, continues he, I could get a living by any other talent, I should never be proud of this. You should reflect, that a man who has spent great part of his life in exercise of this pitiful industry, must of course know more of the matter than you, who throw away a few minutes on it. If I did not exhibit the master-pieces of my dexterity at first was because one should not be in haste to make an unnecessary display of one's knowledge. I have always taken care to preserve my best tricks for particular occasions; and have, besides what I have seen, many others to check young and incorrect observers. I am come, nevertheless, Gentlemen, very readily to acquaint you of the secret that so much embarrassed you; at the same time hoping you will make no use of it to my prejudice; and that you will another time be more served.'

"He produces his machine; when, to our great surprise, we see it consists only of a poor loadstone, which a child, hid under the table for that purpose, moved about without being perceived. As he is putting his loadstone up again we thank him; and, excusing ourselves for what is passed, offer to make him a present, which he refuses. 'No, Gentlemen, says he, you do not deserve so well of me, that I should accept your favours; you shall be obliged to me against my will; this is all the revenge I shall take. I may hence learn that there are men of spirit in conditions of life.' I am paid for the exercise of my hands, and not of my tongue.' In going he addresses to me, particularly, the following primard: 'I can easily excuse the child, say aloud, as he offended only through ignorance. But you, Sir, who ought to have known his error, why did you permit him? As you both together, you, as the elder, owe him your vice and direction. Your experience should have given you the authority for his conduct. In reproaching himself, as he grows up, for the faults of his youth he will doubtless reproach you for those of which you did not advise him.' Having said this, he parts, leaving us both in a good deal of confusion.

"The circumstantial account of this example of more consequence than it may at first appear. How many lessons are contained in this? How many mortifying consequences are to follow the first emotion of vanity? Watch!

care, young preceptor, this first emotion in your
pegs; and be assured, that, if you can thus make
a prodigious of humiliation and disgrace, you will
be long before you see any appearance of a
friend."

SECT. XX. Of the EDUCATION of BOYS intend-
ed for a MERCANTILE EMPLOYMENT.

If the English language were adorned with few-
er eminent historical, philosophical, and poetical
compositions, it might doubtless be necessary to
give the boy, who is designed for a mercantile; or
even a mechanical employment, a classical educa-
tion. At present this does not appear absolutely
necessary, although if the circumstances of the pa-
rents can afford it, it is far from being improper.
The merchant, and even the mechanic, will scarce
find reason to repent his being introduced to the
acquaintance of Plato and Cicero. But still, if
the circumstances of the parents, or any other just
reasons, should render it inconvenient to send the
young man who is intended for trade to study the
ancient languages, means may be easily adopted
to make up for his loss. Confine him not to writ-
ing, arithmetic and book-keeping alone. These,
though absolutely necessary for people in business,
have no power to restrain the passions, or to in-
form the mind with generous and virtuous senti-
ments. Without loading his memory with Latin
and Greek, we may inspire him with a taste for
solid knowledge and elegant literature. The
works of our British historians, some of the purest
and best of our poets, the many excellent perio-
dical works which have appeared in our language,
such as the *Spectator*, the *Tatler*, the *Adventurer*,
the *Mirror*, &c. together with some of our best
translations of the classics, may with propriety be
put into his hands. They will teach him how to
think and reason justly, and to express himself in
conversation or writing with elegance and accu-
racy: they will refine his taste, improve his mind,
and raise him above low and vicious pleasures.
The man, who has occasion to speak or write,
upon business, ought to be ignorant of the
rules of grammar, the young man, who is de-
signed for a mercantile occupation, ought to be
thoroughly instructed in the English grammar.

The virtues, which a merchant is ofteneft called
upon to exercise, are a sacred regard to his engage-
ments, and a strict honesty, which will prevent
him from taking undue advantages, or exacting
unreasonable profits. Punctuality and dispatch
are also duties particularly incumbent on the mer-
cantile profession. Temptations will now and
then arise to seduce the merchant from his inte-
grity. The boy who is intended for trade ought
therefore from his earliest years, to be inspired
with a most sacred regard for truth and justice;
and taught to view deceit and the violation of pro-
mise with abhorrence and disdain.

Oeconomy is a virtue which, in the present age,
seems to be antiquated. Even the merchant of-
ten appears better skilled in the arts of profusion
than those of parsimony. But the consequen-
ces of such folly often prove fatal. Yet without
undervaluing the parsimony of the miser, a cha-
racter equally held in contempt, parents and teach-
ers ought early to impress on the young merchant

habits of frugality; and to show him the folly of
beginning to spend a fortune before he has ac-
quired it. For this purpose the *Essays* of the ce-
lebrated Dr Franklin ought to be recommended
to his attention: particularly his *Advice to a Young
Tradesman*, his *Whistle*, his *Necessary Hints to
those that would be rich*, and his *Way to Make mo-
ney plenty in every Man's Pocket*, &c. Industry is the
constant companion of frugality. A young man,
who is taught oeconomy in other things, will
hardly need to be instructed in the necessity of in-
dustry, or to be told that idleness is the thief of
time, the most precious of all things. Without
industrious application, no man can reasonably
expect to meet with success in his occupation; and
if the merchant leave his business to the manage-
ment of clerks, it is not probable that he will
quickly accumulate a fortune. It is, therefore,
necessary, that he who is intended for trade be
early accustomed to habits of sober application,
and be carefully restrained from volatility and dis-
sipation.

"With these virtues and qualifications (says
Mr Heron,) the merchant is likely to be respect-
able, and not unsuccessful, while he continues to
prosecute his trade; and if, by the blessing of
Providence, he be at length enabled to accumu-
late a moderate fortune, his acquaintance with e-
legant literature, and the virtuous habits which
he has acquired, will enable him to enjoy it with
taste and dignity. Indeed, all the advantages
which a man without taste, or knowledge, or vir-
tue, can derive from the possession of even the
most splendid fortune, are so inconsiderable, that
they can be no adequate reward for the toil which
he undergoes, and the mean arts which he prac-
tises in acquiring it. At the head of a great for-
tune, a fool can only make himself more ridicu-
lous, and a man of a wicked and vicious charac-
ter more generally abhorred, than if fortune had
kindly concealed their crimes and follies by pla-
cing them in a more obscure station."

SECT. XXI. Of the EDUCATION of YOUTH from
PUBERTY to MANHOOD.

"This age (says Mr Heron) is every way a very
important period in human life. Whether we
consider the change which now takes place in the
bodily constitution, or the passion which now first
begins to agitate the breast, still we must regard
this as a critical season to the youth. The busi-
ness of those to whose care he is still entrusted, is
to watch over him so as to prevent the passion for
the sex from hurrying him to shameful and vici-
ous indulgence, and from seducing him to habits
of frivolity and indolence; to prevent him from
becoming either the shameless rake, or the trifling
coxcomb. Though so furious is the impulse of
that appetite which now fires the bosom and shoots
through the veins of the youth, that to restrain
him from the excesses to which it leads can be no
easy task; yet if his education has been hitherto
conducted with prudence, if he is fond of manly
exercises, active, sober, and temperate; and still
influenced by modesty and the sense of shame;
even this may through the blessing of heaven be
accomplished. It is impossible to give better di-
rections than those of Rousseau for this purpose

Let the young man know his situation; set before him in a striking light the virtue which he may practise by restraining appetite, and the frightful fatal vices into which he may be hurried. But trust not to precept, nor to any views which you can lay before him, either of the disgracefulness and the pernicious consequences of vice, or of the dignity and the happy fruits of virtue. Something more must be done. Watch over him with the attention of Argus; engage him in the most active and fatiguing sports. Carefully keep him at a distance from all such company, and such books, as may suggest to his mind ideas of love, and of the gratification at which it aims. But still all your precautions will not counteract the designs of nature; nor do you wish to oppose her designs. The youth under your care must feel the impulse of desire, and become susceptible of love. Let him then fix his affections on some virtuous young woman. His attachment to her will raise him above debauchery, and teach him to despise brutal pleasures: it will operate as a motive to dispose him to apply to such arts, and to pursue such branches of knowledge, as may be necessary for his farther establishment in the world."

SECT. XXII. *Of the EDUCATION of YOUNG MEN of RANK and FORTUNE.*

"Those whom the kindness of Providence has placed in an elevated station, and in affluent circumstances, so that they seem to be born rather to the enjoyment of wealth and honours than to act in any particular profession or employment, have notwithstanding a certain part assigned them to perform, and many important duties to fulfil. They are members of society, and enjoy the protection of the civil institutions of that society to which they belong; they must therefore contribute what they can to the support of those institutions. The labours of the industrious poor are necessary to supply them with the luxuries of life; and they must know how to distribute their wealth with prudence and generosity among the poor. They enjoy much leisure; and they ought to know how to employ their leisure hours in an innocent and agreeable manner. Besides, as their circumstances enable them to attract the regard and respect of those who are placed in inferior stations, and as the poor are ever ready to imitate the conduct of their superiors; it is necessary that they endeavour to adorn their wealth and honours by the most eminent virtues, in order that their example may have an happy influence on the manners of the community.

"Their education ought therefore to be conducted with a view to these ends. After what we have urged in favour of a classical education, our readers will naturally presume that we regard it as highly proper for a man of fortune. The youth who is destined to the enjoyment of wealth and honours, cannot spend his early years more advantageously than in gaining an acquaintance with the elegant remains of antiquity. The benefits to be derived from classical learning are peculiarly necessary to him. Care must be taken to preserve him from acquiring an haughty, fierce, imperious temper. The attention usually paid to the children of people of fortune, and the foolish fondness

with which they are often treated, have a direct tendency to inspire them with high notions of their own importance, and to render them passionate over-bearing, and conceited. But if their temper acquire this bias even in childhood, what may be expected when they advance towards manhood when their attention is likely to be oftener turned to the dignity and importance of that rank which they occupy, and to the pitiful humilities of those beneath them? Why, they are likely to be so proud, insolent, resentful, and revengeful, to render themselves disagreeable and hateful to all who know them; and besides, to be incapable of those delightful feelings which attend humane, benevolent, and mild dispositions. Let the man of fortune, therefore, as he is concerned for the future happiness and dignity of his child, be less careful to prevent him from being treated in such a manner as to be inspired with haughtiness, caprice, and insolence, than to prevent him from being soured by harsh and tyrannical usage.

"The manly exercises, as they are favourable to the health, the strength, and even the modesty of the young gentleman. Dancing, fencing, running, horsemanship, the management of musket, and the motions of military discipline are none of them unworthy of occupying his time at proper seasons. It is unnecessary to point out the advantages which he may derive from dancing; these seem to be pretty generally understood. Perhaps our men of fortune would be ashamed to make use of their legs for running occasions may occur, on which even this humble accomplishment may be useful. Though we do not see the young man of fortune become a jockey; yet to be able to make a graceful appearance on horseback, and to manage his horse with dexterity, will not be unworthy of his station or character. If times of public danger should arise, and the state should call for the services of its subjects against any hostile attack, they whose fortune place them in the most eminent stations will be first expected to stand forth; and the unacquainted with those exercises which are connected with the military art, what a pitiful part must they make in the camp, or in the field of battle?

"As the man of fortune may perhaps enjoy hereditary right, or may be called by the voice of his fellow citizens, to a seat among the legislative body of his country; he ought in his youth to be carefully instructed in the principles of hereditary constitution, and of those laws by which the rights and the rights of his fellow citizens are determined and secured.

"Natural philosophy, as being both highly useful and entertaining, is well worthy of the attention of all who can afford to appropriate any of their time to scientific pursuits; to the man of fortune, a taste for natural philosophy might procure the most delightful entertainment. To trace the wonders of the planetary system, to mark the progress of vegetation, to examine the properties of that fine element which we breathe, to trace the laws by which all the different elements are confined to their proper stations, and above all to apply the principles

and philosophy in the cultivation of the ground, are amusements which might agreeably and innocently occupy many of the leisure hours of the man who enjoys a splendid and independent fortune.

"Neither do we suppose civil history and the principles of morals to be overlooked. Without being acquainted with these, how could any just or accurate knowledge of the laws and political constitution of his country be acquired by the young gentleman? History exposes to our observation the fortune and the actions of other human beings, and thus supplies in some measure the place of experience; it teaches prudence, and exerts to the moral sense. When history condescends to take notice of individuals, they are almost always such as have been eminent for virtue, for abilities, or for the rank which they held in life; to the rich and great it ought to speak with peculiar efficacy, and they ought to be carefully invited to listen to its voice."

Such is the plan of education recommended by Mr Heron in the Encyclopædia Britannica for persons of rank and fortune. He afterwards adds, "We say nothing of causing the young man of fortune to learn the mechanical art. We think skill in a mechanical art might now and then afford him an innocent and pleasing amusement; but we do not consider it as *absolutely necessary*." Mr ROBERTSON, however, who seems to have anticipated, with a kind of prophetic foresight, the present revolutionary state of Europe, is of a different opinion; and it may be at least amusing, if not instructive, to quote his advices upon this head, especially when we consider the time when he wrote them.

"Hiberto, (says that singular genius) we have made no distinction of situation, rank, or fortune; for man is the same in every rank and situation. The rich have no better appetites than the poor, no quicker digestion: the master has not longer arms or stronger than his servant: a great man is no taller than the meanest artisan: in a word, our natural wants being the same in every situation of life, the means of providing for them ought to be the same in all the same. Adapt the education of a man to his personal, and not accidental abilities. Do not you see, that, by bringing him up only to fill one station in life, you make him unfit for every other; and that mere accident may render all the pains you have taken useless, or destructive to him? Is there a more ridiculous being on earth than a lord become a beggar, and retaining in his misery the prejudices attached to his birth? What is more vile and contemptible than a rich man become poor, sensible of the disgrace of poverty, and reduced to the lowest of the human species? The one hath no other resource than to turn common clerk, and the other servilely to put on a livery, with this fine phrase in their mouths, *We must*

"You make a dependence on the actual order of society, without thinking that order subject to inevitable revolutions, and that it is impossible to foresee or prevent that which may affect your station. The high may be reduced low, and the low may become poor, and even the monarch descend into a subject. Are these changes of for-

tune so infrequent, that you can flatter yourself that your pupil will be exempt from them? We certainly are approaching the crisis of human establishments, the age of political revolutions. Who can assure you what will be your lot? All that men have made, they may destroy. There are no characters indelible but those imprinted by nature, and nature never made man royal, noble, or rich. What then will become of the pupil you have educated to live only with splendour, when debased into indigence and meanness? How miserable must be the situation of that pampered helpless being, who, being destitute of every thing, is incapable of providing in the least for himself, and places all his satisfaction in things dependent on others? Happy is he who knows how to quit a rank that is quitting him, and to remain still a man in spite of fortune! Let others lavish what encomiums they please on the frantic behaviour of the vanquished monarch, who wanted to bury himself alive in the ruins of his throne; he is most decidedly an object of contempt. His existence depended on his crown, and had he not been a king, he would have been nothing at all. But the monarch who can throw aside the robes of royalty and be still himself, is infinitely superior to a crown. From the rank of a king, which may be filled up by a coward, a knave, or a fool, he rises to that of a man, which so few are able to fill with decency and dignity."

"A young man (M. Rousseau elsewhere observes) should learn to exert a strong arm; to handle the axe and the saw; to square a piece of unhewn timber, to mount the roof of a house, to lay on the ridge, and to fit the joists and scantlings. If any man whatever be ashamed of this, he is only a slave to prejudice, and one that would be ashamed of the most commendable actions, if they were ridiculed as unfashionable." If any gentleman of fortune, influenced by our philosopher's arguments, should wish to give his son a trade, (which however we have no very sanguine expectations of,) but should be at a loss what business to fix on, or how to procure such a piece of education for him, he may listen to M. Rousseau himself, who, after rejecting that of the tailor, as only fit for women, those of the blacksmith and brazier as dirty, and that of the cloth-weaver, as rendering a man nearly as much a machine as his loom, adds "all things duly considered then, the trade most suitable perhaps for our pupil is that of a joiner; which is neat, useful, and may be carried on within doors. It is sufficiently laborious too to keep the body in exercise, and requires both diligence and dexterity: at the same time, taste and elegance are not excluded from being displayed on the form and contrivance of the work. If it should so happen, indeed, that your pupil has a natural turn for the speculative sciences, you cannot be blamed for teaching him a mechanic art conformable to his inclinations; let him learn, for example, to design and construct mathematical instruments, quadrants, telescopes, and the like.

"When your pupil learns a trade, you also will learn it with him; for he will never learn as it should be, what you do not learn together. You must not affect to be treated as gentlemen, but as

real workmen, who are not trifling with a profession. Czar Peter worked as a common ship carpenter in the yard, and served as a drummer in his own troops. Do you think, reader, that prince was not your equal, at least, either in birth or merit? Unfortunately, however, we cannot spend all our time at the work-bench; as we have not only to learn the profession of a joiner, but also that of a *man*, the latter of which is by much the most tedious and difficult. What then shall we do? Shall we hire a master joiner, for an hour in a day, as we do the dancing-master? No: That would not be making ourselves his apprentices, but his scholars; and our ambition is not so much to learn the trade, as to *raise ourselves to the condition* of a joiner. We should therefore go once or twice a-week at least, and spend the whole day at his shop. We should rise at his hour in the morning, and be at our work before him. We should eat at his table, work according to his orders, and, after having had the honour of supping with his family, return, if we please, to sleep on our own hard mattresses. Thus you see how we might learn several trades at once, and exercise ourselves with manual labour, without neglecting our other accomplishments."

M. ROUSSEAU afterwards mentions, that "from an ancient custom peculiar to the Ottoman race, the Grand Signior is obliged to practise some mechanical employment, and every one knows the superior merit of such workmanship."—It is not a little remarkable, that what the Eastern emperors do from custom, our most gracious sovereign has voluntarily done from his youth. What Briton then of any rank, should be ashamed to follow so great an example?

SECT. XXIII. Of REGULATING the PASSIONS of YOUTH.

The following reflections of M. Rousseau, upon the *passions*, appear to be not unworthy of attention, although he evidently dates the origin of the sympathetic affections by far too late. To suppose a human being "*hardly sensible of the sufferings of others*," till the age of *sixteen* is both absurd and contrary to universal experience. Mr Brookes in his *Fool of Quality*, writes much more agreeably to nature, when he makes his hero, Harry, so much attached by puerile friendship to his game cock, as to risk his life for him at three years of age. Even Rousseau himself, in another work, entitled *Reveries*, (a work wherein we may surely give him full credit, as he appeals to the Almighty Searcher of hearts for the truth of it,) acknowledges, in the anecdote he records respecting his school-mistress, that he even felt the first beginnings of attachment to the fair sex, when hardly half that age. But Rousseau in his *Emilius*, though he professes to follow nature only, overlooks both nature and experience, as too many modern philosophers are apt to do, when they wish to establish a favourite theory.

"All human wisdom, (says he,) as far as it concerns the use of the passions, consists, first, in perceiving the true relations of a man, both with regard to the species and to the individual; and secondly, in regulating the different affections of the mind according to these relations. But it

may be asked, whether man has it in his power to regulate his affections according to this or that particular relation? Most certainly he has, if he is in his power to direct his imagination to any particular object, or to give it this or that particular turn. Besides, the present question does not so much regard man's power over himself, as what may possibly be done with our pupil, by proper choice of the circumstances in which he is placed.

"Whilst his sensibility is confined merely to himself, there can be nothing moral in his actions: it is only when it begins to extend to others that he acquires the perception and idea of good and evil, which constitutes him really man, and an integral part of his species; to this period therefore let us confine our observations. The real progress of nature is gradual and slow; the motion of the blood quickens; the spirits begin to ferment, and the constitution forms by slow and certain degrees. A long inquietude precedes the first desires, a long ignorance diverts them in various ways, and we desire we know not what. The blood flows quick, the pulse beats high, and a superabundance of life seems impatient to exceed its limits. The eye acquires vivacity, and instinctively explores all other beings; we begin to have an interest in those by whom we are surrounded; we begin to perceive that we were not made to live alone. Thus the heart begins to open to human affections, and becomes capable of attachment.

"The first sentiment of which a youth, completely educated, is susceptible, is not love, but friendship. The first act of his youthful imagination, is to inform him that there are beings similar to himself, and the species affects him before the sex. Another advantage arising from prolonging his innocence is, that it enables us, by means of his growing sensibility, to sow the first seeds of humanity in his heart; an advantage of infinite importance, because it is the only time of his life when this care will be attended with equal success.

"It is a fact, that young people, early corrupted, and addicted to debauchery, are inhuman and cruel; the heat of their constitution renders them impatient, vindictive, and impetuous. Their imagination, engrossed by one particular object, rejects every other; they have neither tenderness nor pity, and would sacrifice all the world to the most trifling gratification. On the contrary a youth educated in simplicity and innocence, is inclined to the tender passions by the first impulse of nature. His sympathetic heart feels the sufferings of his fellow creatures; it leaps with joy at the unexpected sight of a beloved companion, his arms fly open to embrace him with ardour, and his eyes overflow with gladness. He is sensible of shame for giving displeasure, of regret for having offended. If the natural warmth of his constitution renders him hasty and passionate, you will immediately perceive the goodness of his heart in the effusion of his repentance; he weeps, he sighs over the wound he has given: he would gladly compensate with his own blood, that which he has shed; his anger subsides, and his pride is humbled in the sense of his fault. If he is offend-

ed, one single word of apology disarms him, though in the height of resentment; he pardons the faults of others as willingly as he makes reparation for his own. Youth is not the age of revenge and hatred; on the contrary, it is that of compassion, clemency, and generosity. We may assert without fear of contradiction, from experience, that a youth, not meanly bred, who has preserved his innocence to the age of twenty, is at that period the most generous, the best, the most affectionate, and the most amiable of mankind.

"Man is rendered sociable by his weakness; it is our common misery which inclines the heart to humanity. Every attachment is a sign of insufficiency. If we stood in no need of assistance, we should hardly think of uniting ourselves to each other; so that human felicity, uncertain as it is, proceeds from our infirmities. A being absolutely happy, must be alone and independent. God only enjoys absolute happiness; but of that happiness who can have any idea? If an imperfect being could be supposed to have an independent existence, what, according to our ideas, would be his enjoyment? In being alone he would be miserable. He who wants nothing, will love nothing, and it cannot be conceived that he who loves nothing can be happy.

"Hence it follows, that our attachment to our fellow creatures is rather owing to their sympathizing with their pains, than with their pleasures; for at first we more evidently perceive the identity of our nature, and a security for their attachment to us. If our common necessities unite us from a principle of interest, our common miseries unite us by affection. The fight of a happy man is more apt to inspire envy than love; we readily accuse him of usurping a privilege to which he has no exclusive right, and our self love suffers in the idea, that he has no need of our assistance. But who does not bemoan the unhappy sufferer? Who would not release him from his misfortunes, if it cost no more than a wish? We prefer to imagine ourselves in the situation of the wretched, than in that of the happy; because we perceive ourselves more nearly allied to the one, than to the other. Compassion is a grateful passion, because, though we sympathize with the sufferer, we secretly rejoice that his pains are not our own. Envy, on the contrary, is painful, so far from sympathizing in the happiness of others, we grudge them their enjoyments. The first seems to exempt us from the evil he suffers, and the latter to deprive us of the blessings he enjoys.

"If you would encourage the first impulses of improving sensibility in the heart of a young man, and incline his disposition towards virtue and benevolence, be careful not to sow the seeds of pride, and envy, by a false representation of human society. Let him remain unacquainted with the pomp of courts, the magnificence of palaces, and the charms of public entertainments; let him appear in polite circles and brilliant assemblies. Give him not a superficial view of society till he is able to make a proper estimate of its intrinsic value. To shew him the world in general, before he knows something of man in particular, would

be to corrupt, instead of forming his mind; to deceive instead of instructing him.

"Men are not naturally opulent, courtiers, nobles, or kings. We come into the world naked and poor; we are all subject to the miseries of life, to grief, necessity, and evils of various kinds: in short, we are all condemned to die. Such is the true picture of man. Let us therefore begin by studying those things which are inseparable from human nature, that which most essentially constitutes humanity. At the age of 16 we know what it is to suffer, for we ourselves have already suffered: but we are hardly sensible of the sufferings of others: to see without feeling them, is not to know them; and a child has no idea of what others feel; he knows no evils but his own: but, when the first display of his faculties kindles the fire of his imagination, he begins to perceive that he does not exist independent of his fellow creatures; he feels their complaints, and sympathizes in their sorrow. At this time the tragical picture of our existence should excite in his heart the first feelings of humanity.

"When that critical age approaches, which indicates the existence of those desires that are natural to the sexes, exhibit to your pupil such scenes as may restrain, rather than accelerate the growth of his passions. Carry him from the town, where the immodest dress and behaviour of the women anticipate the instructions of nature; where every scene presents him with pleasures, with which he ought to remain unacquainted till he is able to choose with propriety. Carry him back to his first habitation, whose rural simplicity will suffer his passions to unfold in their natural gradation. But if a taste for the arts should attach him to the town, let that taste serve to prevent a dangerous inactivity. Be extremely circumspect in the choice of his companions, his employments, his pleasures. Shew him such pictures as are affecting, but modest; such as will nourish his sensibility, without inflaming his desires. But let us not forget, that whilst we endeavour to avoid one extreme, there is a possibility of falling into the other. It is not our intention to afflict your young pupil continually with objects of horror and distress: to carry him from hospital to hospital, and from one prison to another. We must not, by too frequent repetition, harden, instead of softening, his heart, at the sight of human woes. What we too often behold we cease to imagine, and it is in imagination only that we feel the miseries of others. Hence, from their constant visits to the dying and the sick, the hearts of priests and physicians grow callous and obdurate. Let your pupil, therefore, be made acquainted with the lot of man, and the sufferings of his species; but let him not be too frequent a witness of such calamity. A single object, judiciously chosen, and shewn at a proper time, will inspire him with tenderness, and afford him reflection for a whole month. It is not so much the object itself, as his return to it in idea, which determines his judgement; and the permanence of the impression upon his mind depends also less upon the object than the point of view in which it is recalled to his mind: By this management of our examples,

lessons,

never let severity extend to blows. Let the boy be allured and led, by the most artful and insinuating treatment, to do his duty; there will then be no occasion to punish him for neglecting it."

Quintilian's professed object being, not merely to give general directions for forming the heart and cultivating the understanding, but to form a particular character in life, the scholar and the orator; he enters into minute details concerning the manner in which the boy is to be instructed in speaking, writing, grammar, and composition. Music and geometry, he advises also to make a part of the young orator's studies; to render him accurate in reasoning, and capable of relishing the beauties of the poets. With tender attention, this elegant writer accompanies his pupil through the course of his studies; insists that he be placed under a master distinguished for purity of morals, as well as for abilities; advises his memory to be stored with the best passages of the poets, orators, and historians; and refutes the opinions of those who represent genius as above industry.

2. Among the moderns, few names are more justly venerated, than that of JOHN MILTON. His life was devoted to study; and part of it was employed in instructing youth. Among his other works we find a *Treatise on Education*. He had himself been educated according to the plan long established in the English universities. The object of his directions is chiefly to form the scholar, and to exhibit a plan of "a better education, in extent and comprehension far more large, and yet of time far shorter, and of attainment far more certain, than any that had yet been in practice." The following is the substance of his treatise. The end of learning is to cultivate our understandings, and to rectify our dispositions, by enriching our minds with the treasures of wisdom. But in the present modes of education this design does not appear to be kept in view. The learner of Latin is burdened with rules, themes, verses, and orations; but no care is taken to make him master of the valuable knowledge which the classics contain. And when he advances farther, he is driven into the thorny paths of logic and metaphysics. So, when his studies are completed, he is almost as destitute of real knowledge as when he first entered a school.

To render learning truly beneficial, instead of the school and university education which youth at present receive, Milton proposes, that the place of both school and university be supplied by an academy, in which they may acquire all that is taught at either, except law and physic. Let the academy afford accommodation for 150 persons; 20 of whom may be servants and attendants. As many academies as are necessary may be afterwards erected on the model of this one. Let the youth who are introduced into this academy begin with learning the principal rules of grammar. In their pronunciation of Latin, let them follow that of the Italians; (or, he might have said, that of the *Scots*;) as that of the English is indistinct, and unsuitable to the genius of the language. Next, read to them some entertaining book on education; such as, the 3 first books of Quintilian in Latin, and Cebes, Plutarch, or some other of the Socratic discourses, in Greek; and

inspire them, by seasonable lectures, with love learning, admiration of great and virtuous characters, and a disposition to cheerful obedience. At a different hour, let them be instructed in arithmetic and geometry. Between supper and bed time instruct them in the principles of religion and the sacred history. From the writers on education let the pupils pass to the authors on a culture, to Cato, Varro, and Columella. Be half these authors he read, they cannot but be pretty well qualified to read most of the Latin authors. They may now learn the use of globes, and make themselves acquainted with ancient and modern maps. Let them about time, begin the study of the Greek tongue, proceed in it as in the Latin: they will not far overcome, in a short time, all the difficulties of grammar; after which they will have access to all the treasures of natural knowledge to be found in Aristotle and Theophrastus. In the same manner they may make themselves acquainted with Vitruvius, Seneca, Mela, Celsus, Pliny, and Linus. Let them next turn their attention to mathematics, beginning with trigonometry, and introduction to fortification, architecture, and navigation. To teach them the knowledge of nature, and the arts of life, let them have the instructions of artists and mechanics, whose skill has been obtained by actual practice. They will read the poets with ease and pleasure. From them let them proceed to the moralists; after which they may be allowed the best Greek, Latin, Italian, dramatic compositions. From these let them proceed to politics: let them here study the law of Moses, the admirable remains of the ancient lawgivers of Greece, the Roman table laws, and pandects, concluding with the institutions of their mother country. Let them not more particularly instructed in the principles of theology; having by this time acquired the Hebrew language, together with the Chaldean, the Syriac dialect, whereby they may read scriptures in their original tongue. Thus furnished, they will be able to enter into the spirit of the noblest historians and poets. To get by heart and repeat in a proper manner, passages from the writings of some of these, will have the happy effects in elevating their genius. Let this edifice be crowned with logic and rhetoric. It would unite the advantages of an Athenian and Spartan education: for the pupils should be taught the exercises of wrestling and fencing, the whole military discipline.

Such are the sentiments of our admired poet on education. Such a plan was to be expected from one who was an enthusiastic admirer of the sciences, arts, and institutions of Greece and Rome: who, from his religious and political principles, was no friend to the universities. Observing the mode of education which then prevailed, he fixed the attention of youth almost wholly on words, he could not but regard the scheme which he proposed as likely to produce very happy effects.

3. The name of JOHN LOCKE is sufficient to cite the attention of every reader to what he has written on the education of youth. He was capable of thinking for himself; but unlike Rousseau, and desirous of rendering himself useful, than of being

accused for singularity. Mr Locke had been conversant with the world, had inquired into the principles of human nature, and had examined without prejudice the effects of those modes of education of which he disapproves. When we consider, that, to render himself useful to mankind, he could descend from the heights of science to the humble task of translating *Æsop's Fables*, which a philosopher of less philanthropy would have disdained; we cannot but look with veneration on the modest character.

Mr Locke's two chief objects in his *Treatise on Education*, are, 1st, To preserve and strengthen the body constitution; 2dly, To inform the understanding with useful knowledge, and to cherish good dispositions in the heart. In his directions for the first of these heads, he recommends plain food, simple and light clothing, with abstinence from spiritous and strong liquors, as the most judicious means for preserving and confirming the health of children; together with temperance and early rising. In one thing, however, few parents will be willing to comply with Mr Locke's advice. He not only directs that the child's feet be frequently bathed in cold water; but even wishes that his shoes were always kept in such a condition as to admit water freely. This he thinks likely to fortify the constitution of the body in such a manner, as to render him less liable, in the course of life, to such diseases as arise from any partial exposure to wetness or cold, than others whose feet have been more carefully kept dry. Mr Locke entertained so unfavourable an opinion of the effects of medical preparations on the human body, that he insists on the parent to beware of administering any of them to his child. But however may be thought of these advices, or of opinion of invigorating the constitution, by exposure to hardships, his method of cultivating the understanding, and forming the dispositions, deserves the attention of parents and preceptors. With a virtuous indignation he reproaches folly by which we generally corrupt the temper of children, in infancy; and render them incorrigible when they advance to life. On the other hand he reckons it unnecessary nor prudent to treat them with harshness or severity. Let them be formed to obedience from their earliest years: let them be accustomed to submit implicitly to the direction of those on whom they depend. But beware of relaxing their tempers, and depressing their spirits with tasks; as well as of accustoming them to neglect their duty, except when allured to it by promises of reward. Inspire them with a sense of honour, and with a generous thirst for praise; and honour them when they do well; but treat them with neglect when they act amiss. This produces much better effects than if you were always to chide and beat them; at another, to reward them with a profusion of sweetmeats and toys.

Mr Locke does not approve of forming children too early an age, to all that politeness and civility of manners which should distinguish them when they become men. Let them be brought up in a easy, graceful carriage of body: but they should now and then blunder against

the punctilios of good-breeding, time will correct their awkwardness. This great man was of opinion that a private education is more favourable than a public one to virtue, and scarce less favourable to learning. He advises to regulate that domestic education in a judicious manner; to keep him at a distance from evil example; to choose the most favourable seasons for instruction: to enforce obedience strictly, but never by blows, except in cases of obstinacy otherwise incurable. If his engagements in life prevent the parent from superintending and directing his son's education personally, let him commit him to the care of a virtuous and judicious tutor, who is rather a man of experience in the world than of profound learning; for it is more necessary that the pupil be formed for conducting himself with prudence in the world, and be fortified against those temptations to which he will be exposed in active life, than that his head be stuffed with Latin and logic.

Mr Locke, although his own mind was stored with Grecian and Roman literature, is against that application to ancient learning, which was then indispensably required in the education of youth. He considers languages and philosophy as rather having a tendency to render the youth unfit for acting a prudent and becoming part in life, than forming him for it: and he therefore insists that these should be but in a subordinate degree the objects of his attention.

To restrain every foolish or irregular desire in a child, never indulge his wishes, but when you find the indulgence proper. Curiosity, however, ought to be industriously roused in the breast of the child, and cherished by meeting always the readiest gratification. He should be indulged in play, while he continues to play with keenness and activity; but not suffered to loiter about in indolence. To restrain him from fool-hardy courage, point out to him the dangers to which it exposes him: to raise him above timorous cowardice, and inspire him with manly fortitude, accustom him from the earliest period of life to an acquaintance with such things as he is most likely to be afraid of: subject him now and then to pain, and expose him to danger; but let such trials be judiciously conducted.

When from idleness or curiosity, children treat dogs, cats, birds, butterflies, &c. with cruelty, Mr Locke advises that they be carefully watched, and every means used to excite them to generous sensibility. Allow them to keep tame birds, dogs, &c. only on condition of their using them with tenderness. He supposes that this unhappy disposition to cruelty is occasioned, or fostered, by people's laughing when they behold the impotent efforts of children to do mischief; and sometimes even encouraging them in maltreating those creatures which are within their reach. He censures the practice too of entertaining them with stories of fighting and battles; and representing characters distinguished for atrocious acts of inhumanity as great and illustrious. Let such practices be refrained from, if you wish to inspire your child with generous and humane sentiments. Teach him gentleness and tenderness, not only to brutes, but also to servants and companions.

The inquiries of a child ought to be answered readily,

readily, though his questions be put in awkward language. Curiosity is natural, and if not repressed, he will often be excited by it to the pursuit of knowledge. Let him find his eagerness in this pursuit, a source of applause and esteem. Avoid the folly of those who sport with the credulity of children, by answering their questions in a ludicrous or deceitful manner.

When he attempts to reason on such subjects as are offered to his observation, be careful to encourage him: praise him if he reasons with any degree of plausibility; even if he blunders, beware of laughing at him. With regard to the boy's play-things: while you indulge him freely in innocent diversions, give him such play-things as may be necessary in the amusements in which he engages, but it will be still better to exercise his ingenuity in making them himself.

Mr Locke next proceeds to those particular parts of knowledge, in which he thinks every young gentleman ought to be instructed. In virtue, wisdom, breeding, and learning, he comprehends all that is necessary to enable his pupil to act a respectable part in life.

In forming the boy to virtue, he advises first to inform him of the relation subsisting between human creatures and a supreme independent Being, and to teach him, that obedience and worship are due to that Being; but beware of impressing his mind with any notions concerning spirits or goblins, which may render him incapable of bearing darkness or solitude. Next labour to impress his mind with a veneration for truth; habituate him to a strict adherence to it; and endeavour to render him gentle and good-natured.

Mr Locke recommends, as the best means to teach a child wisdom or prudence in conducting himself in the ordinary business of life, to teach him to despise the mean shifts of cunning. The rest must be learned by actual experience.

GOOD BREEDING forms no inconsiderable part of a good education. In teaching this, Mr Locke advises, 1st, To inspire the youth with a disposition to oblige all with whom he is conversant; next, to teach him how to express that disposition in a becoming manner. Let boisterous roughness, contempt of others, censoriousness, impertinent raillery, and a spirit of contradiction, be banished from his temper and behaviour. But beware of leading him to regard the mere *forms* of intercourse as matters of the highest importance. Teach him that genuine good breeding is only an easy and graceful way of expressing good sense and benevolence in his conversation and deportment.

Mr Locke advises to initiate the child in reading, as an amusement, without letting him know that he is engaged about a matter of any importance: or teach him to consider it as an high honour to be permitted to learn his alphabet; otherwise he will turn from it with disgust. Such books only as are plain, entertaining, and instructive, should at this time be put into his hands. Mr Locke disapproves of an indiscriminate perusal of the Bible at this period of life; but reckons it highly proper, to cause him peruse some of its beautiful historical passages, with its elegant and simple moral precepts. He advises next to teach

him writing, and as the easiest way to initiate in that art, to get a plate engraved, and a number of copies cast with red ink; the letters to be written by the learner with black ink. He also advises drawing, if the boy be not naturally incapable of acquiring it.

The scholar must next begin an acquaintance with other languages. Yet, says Mr Locke, none waste their time in attempting to acquire knowledge of Latin, but such as are designed some of the learned professions, or for the gentleman without a profession. To the rest it may be useful; to others Mr Locke thinks it is wholly unserviceable. But in learning Latin tongue, he proposes, as a much happier method than burdening and perplexing a boy with grammar, to make him speak it with a tolerably sufficient master of it for that purpose.

But here, however highly we venerate the notions of this great man, we cannot help think this part of his plan impracticable, from the nature of the Latin language. The best tutor that ever appeared, since the days of Cicero, will never be able to teach a young man the Latin language, by conversation, and makes him first perfectly acquainted with the rules and peculiarities of Latin grammar. Without these, the most that a pupil could acquire by conversation would be nothing but a barbarous jargon of bad Latinity. Most modern languages may be acquired by conversation, but Latin and Greek, we venture to affirm, never will.

Mr Locke however proposes, that if we conveniently have the boy taught Latin by conversation, the introductory books should be accompanied with an English version, which he may have recourse to, for the explanation of the Latin. And he again prohibits perplexing him with mathematical difficulties, as at his age, it is impossible to enter into the spirit of these things.

Here again we differ from Mr Locke. We know by experience, that it is much easier to teach a boy of 12 years of age to make himself master of all the difficulties of Latin Grammar, than to enter into the spirit of Cicero, Horace, or Virgil, as to give a free translation of these authors.

But, says Mr Locke, skill in grammar is useful to those whose lives are to be dedicated to the study of the dead languages: that knowledge which the gentleman and the man of the law may have occasion to derive from the ancient languages, may be acquired without a painful study of prosody or syntax. As the learning of a language is merely learning words; if possible, it should be accompanied with the acquisition of the knowledge of things; such as the nature of animals, &c. He insists that the boy be not overburdened and tormented with the composition of Latin themes and verses. Neither let him be oppressed with whole pages and chapters of the classics. Such ridiculous exercises have a tendency, whatever prejudice may urge to the contrary, to improve him either in the knowledge of languages or of nature.

Mr Locke, however, wishes that the French language were learned along with the Latin. These to be accompanied with the study of arithmetic, geography, history, and chronology.

these branches of knowledge be communicated to the learner in one of the two languages; and he will thus, he thinks, acquire the language with greater facility. We fear, however, the difficulty of acquiring these sciences, particularly the two first, would thus be proportionably increased. One method which Mr Locke recommends for facilitating the study of language is, to put into the youth's hands, as soon as he has acquired a tolerable knowledge of chronology, some of the most entertaining Latin historians: the interesting nature of the events which they relate will not fail to command his attention, in spite of the difficulty which he must find in making out their meaning. The Bible and *Cicero de Officiis* will be his best guides in the study of ethics. The law of nature and nations, as well as the civil and political institutions of his country, he also recommends as important objects, which he ought to study with the most careful attention. Rhetoric and logic, with all their rules and terms, will contribute little to render him an acute reasoner or an eloquent speaker. Cicero and Chillingworth will be more beneficial in teaching him to reason and to persuade, than all the treatises on those arts which he can peruse, or all the lectures which he can hear.

In every art and science, Mr Locke prefers practice and experience to rules. Natural philosophy, as contributing to inspire the breast with warmer sentiments of devotion, and serving many useful purposes in life, ought to make a part in the young gentleman's studies. But he prefers the humble experimental writers on that subject to the lofty builders of systems. As for Greek, Mr Locke does not think it necessary for a gentleman or man of the world.

He recommends dancing, as contributing to ease and gracefulness of carriage; with riding and fencing, as necessary branches of a young gentleman's education. He also advises that he should learn some mechanical trade, with the exercise of which he may agreeably fill up some of his leisure hours. But he insists that he should by no means be unskilled in the management of accounts. Travelling, he thinks, will do more hurt than good to the understanding and morals of the traveller, which deferred to a later period, than that at which young gentlemen are usually sent out to complete their education by traversing foreign countries.

4. The rev. Dr ISAAC WATTS, whose numerous works upon philosophy, logic, divinity, &c. are well known, has also a *Discourse on the Education of Children and Youth*; annexed to his excellent Treatise on *The Improvement of the Mind*. It treats of, 1. Instructing children in religion, which the Dr thinks should be attempted "as soon as they begin to know almost any thing:" 2. The improvement of their natural powers: 3. Self-government, which he proposes children to be early instructed in: 4. Reading and writing: 5. An employment: 6. Rules of prudence: 7. Accomplishments in life; among which the Dr enumerates, the Greek, Latin, and French languages, &c. mathematics, arithmetic, algebra, geography,

astronomy, natural philosophy, history, poesy, music, drawing, fencing, riding, and dancing; in which last accomplishment the Dr "confesses he sees no evil," though he thinks "mixed dancing has most sensible dangers," over which "a wise parent will keep a watchful eye upon the child." With regard to the languages, the Dr reckons "the knowledge of things of much more importance than that of words." 8. Of evil influences, from terrifying stories, bloody histories, &c. 9. Of sports and diversions, amongst which he justly condemns the practice of cock-fighting, as well as plays and masquerades. 10 & 11. His two last sections treat of the proper degrees of liberty and restraint in sons and daughters. From these general heads, this tract evidently appears to be well worthy of the attention of Christian parents.

5. Dr TURNBULL published *Observations on Liberal Education*; at London, in 1742. This work contains the essence of what has been written on the subject by the ancients; with remarks from Mr Locke and others of the moderns. The author shows the importance of early habits of virtue, and recommends along with the acquisition of the vernacular and learned languages, the study of natural and moral philosophy, and the cultivation of a taste for the beauties of nature and the still greater beauties of virtue. Dr Chapman says it "abounds in instructions very useful to parents and children."

6. In 1743, Mr JAMES BARCLAY published at Edinburgh a *Treatise on Education*, in 12mo, containing, says Dr Chapman, "many useful observations on public and private education, the duty of parents and teachers; grammar, history, taste, poetry," &c.

7. In 1756, Mr JAMES NEILSON, apothecary, published an *Essay on the Government of Children, under three general Heads; Health, Manners, and Education*, 12mo, Lond. Dr Chapman recommends this work as containing "many judicious rules and observations worthy the attention of parents and teachers."

8. In 1762, the celebrated JOHN JAMES ROUSSEAU surprised the public with his *Emilius*; a moral romance in 4 vols 12mo. Although such of our readers as have not seen this work may form a pretty general idea of it, from the large extracts we have already given; yet to enable them to form a more complete judgment, we shall quote the character given of it, by Mr Heron, in the *Encyclopædia Britannica*, with very little alteration.

"For originality of thought, affecting sentiment, enchanting description, and bold vehement eloquence, (says he) this book is one of the noblest pieces of composition, not only in the French language, but even in the whole compass of ancient and modern literature". The irregularity of his method, however, renders it a very difficult task to give an abridged view of his work. He conducts his pupil, indeed, from infancy to manhood. But instead of being barely a system of education, his work is besides a *treasure of moral and philosophical knowledge*. He has chosen a path, and follows it from the bottom to the summit of the hill: yet whenever a flower appears on the right or left hand,

"These encomiums are rather too high, we think, but we quote this passage verbatim.

hand, he eagerly steps aside to pluck it ; and sometimes, when he has once stepped aside, a new object catches his eye and seduces him still farther. Still, however, he returns. His observations are in many places loosely thrown together, and many things are introduced, the want of which would by no means have injured either the unity or the regularity of his work. If we attempt to review the principles on which he proceeds, in reprobating the prevalent modes of education, and pointing out a new course, his primary and leading one seems to be, that we ought to watch and second the designs of *nature*, without anticipating her. As the tree blossoms, the flowers blow, and the fruit ripens each at a certain period ; so there is a time fixed in the order of nature for the sensitive, another for the intellectual, and another for the moral powers of man to display themselves. We in vain attempt to teach children to reason concerning truth and falsehood, concerning right and wrong, before the proper period arrive : We only confound their notions of things, and load their memories with words without meaning ; and thus prevent both their reasoning and moral powers from attaining that strength and acuteness of which they are naturally capable. He attempts to trace the progress of nature, and to mark in what manner she gradually raises the human mind to the full use of all its faculties. Upon the observations which he has made in tracing the gradual progress of the powers of the human mind towards maturity, his system is founded.

"As it is impossible to communicate to the blind any just ideas of colours, or to the deaf of sounds ; so it must be acknowledged, that we cannot possibly communicate to children ideas which they have not faculties to comprehend. If they are, for a certain period of life, merely *sensitive* animals, it must be folly to treat them during that period as *rational* and *moral* beings. But is it a truth that they are, during any part of life, guided solely by instinct, and capable only of sensation ? Or, how long is the duration of that period ? Has nature unkindly left them to be, till the age of 12, the prey of appetite and passion ? So far are the facts of which we have had occasion to take notice, concerning the history of infancy and childhood, from leading to such a conclusion, that to us it appears undeniable that children begin to reason very soon after their entrance into life. When the material world first opens on their senses, they are ignorant of the qualities and relations of surrounding objects : they know not, for instance, whether the candle which they look at be near or at a distance ; whether the fire with which they are agreeably warmed may also affect them with a painful sensation. But they remain not long in this state of absolute ignorance. They soon appear to have acquired some ideas of the qualities and relative situation of bodies. They cannot, however, acquire such ideas, without exerting their reasoning powers in a certain degree. Appearances must be compared, and inferences drawn, before knowledge can be gained. It is not sensation alone which informs us of the relative distances of bodies ; nor can sensation alone teach us, that the same effects which we have formerly observed will be again produced by the same cause.

"But if children appear capable of reasoning at a very early period, they appear also to be at a very early period subject to the influence of the passions : they are angry or pleased, merry or sad friends or enemies, even while they hang at the breast ; instead of being selfish, they are naturally liberal and social. And if we observe them with attention, we will find that the passions do not display themselves sooner than the moral faculties. As it is wisely ordered, that we should not see and hear, and feel, without being able to compare and draw inferences from our perceptions so it is a no less certain and evident law of nature that the passions no sooner begin to agitate the human breast, than we become able, in a certain degree, to distinguish the beauty and the deformity of virtue and vice. The child is not only capable of gratitude and attachment to the person who treats him with kindness ; he is also capable of distinguishing between gratitude and ingratitude, and of viewing each with proper sentiments. He cries when you refuse to gratify his desires, but he boldly insists that he is injured when you use him cruelly or unjustly. It is indeed impossible to attend to the conduct of children during infancy, without being convinced that they are even then, capable of moral distinctions. So little are they acquainted with artificial language, that we and they do not then well understand each other. But view their actions ; consider those by which nature has taught them to express themselves. Our limbs, our features, and our sense are not gradually and by piecemeal bestowed ; we advance towards maturity ; the infant body comes not into the world mutilated or defective. Why then, in point of mental abilities, should we be for a while brutes, without becoming rational and moral beings till the fulness of time be accomplished ? all the differences between the phenomena of manhood and those of infancy at childhood may be accounted for, if we only reflect, that when children come into the world they are totally unacquainted with all the objects around them ; with the appearances of nature and the institutions of society ; that they are set into the world in a feeble state, in order that their helplessness occasioned by their ignorance may attract the notice and gain the assistance of those who are able to help them ; and that they attain to full strength in the powers either of mind or body, nor a sufficient acquaintance with nature, with artificial language, and with the arts and institutions of society, till they arrive at manhood.

"Even Rousseau, notwithstanding the art with which he lays down his system, cannot avoid a knowledge indirectly, on several occasions, that our social dispositions, our rational and our moral powers, display themselves at an earlier period than that at which he wishes us to begin the cultivation of them.

"But though the great outlines of his system are merely *theory*, unsupported by *facts*, nay plain contradictory to facts ; yet his observations on the impropriety or absurdity of the prevalent modes of education are very often just, and many of the particular directions which he gives for the conducting of education are judicious. He is often fanciful, and often deviates from the common

road only to shew that he is able to walk in a separate path: yet his views are liberal and extensive: his heart seems to have glowed with benevolence: his book contains much observation of human actions; displays an intimate acquaintance with the motives which sway the human heart; and though by no means a perfect system for education, is yet superior to what many other writers had before done upon the subject."

9. Father GERDIL, in his *Reflections on Education*, published in 1765, examines the principles laid down by M. Rousseau in his *Emilius*, and shews in opposition to him, that man is designed for a social state, and improved by it; that children are capable of early instruction, and may be taught history, geography, history, and geometry; that they may be formed to a taste for true Latinity; and that the lower, as well as the higher rank of life, ought to be trained, by early culture, to the fear of God, obedience to parents, and the fundamental duties of society.

10. Mr SHERIDAN, in his *Plan of Education for the young Nobility and Gentry of Great Britain*, published in 1769, censures the methods commonly pursued in the great schools in England, and points out the ends we ought to have in view, and the means and the instruments we ought to use, in the education of youth: The ends are. To make good men, good citizens, and good Christians; the means, a strict attention to their behaviour, and to directing their studies to their talents, and to their future professions and offices in life; the instruments, a sense of honour, a sense of shame, and, above all, a sense of delight.

He recommends the English language, as the first and greatest object, and the Latin only as subservient to it, and enjoins frequent versions from Latin into English, and public recitals both in prose and verse, of such passages as may tend to inculcate the principles of religion, and inspire the love of virtue and of liberty. He divides his school into the upper and lower, and assigns a separate room, and a separate master to each school; in the lower school, he proposes that the boys should be divided into classes according to their standing, and that all should pursue the same course of studies, and perform the exercises mentioned already. But, in the upper school, he enjoins the scholars to be divided according to the professions and employments for which they are designed, and this to be the chief object in view in the studies and exercises of each class. In this school, he would have fix classes. 1st. For those who have the prospect of becoming members of the legislature. 2d. For those who are designed for holy orders, or the profession of physic. 3d. For the profession of the law. 4th. For the army. 5th. For civil employments, and mercantile professions. 6th. For gentlemen of independent fortunes, who may divide their time between the town and country. All these he divides into smaller classes, or removes, in proportion to the number of boys and their different advances in their studies, each remove to consist only of such a number of boys as the tutor can instruct and superintend with ease: accordingly he supposes each remove to consist of 10 boys, and assigns a tutor to them, with a separate room for study and the preparation of their lessons

during 5 days of each week; and he appoints the two schools to be employed only for the public examinations and exercises of each class, one day every week, and public judgments to be given in the common hall. On these occasions, the boys who outstrip their fellows, and appear to be qualified, may be promoted from a lower to a higher remove. Besides these weekly reviews, he proposes quarterly examinations of a more public nature, to be attended by the parents and friends of the children, and premiums to be distributed to those who answer best in each class, but chiefly to those who excel in delivery and English composition.

Mr Sheridan proposes also a plan of an academy for finishing the education of noblemen and gentlemen of independent fortunes, after they have gone through the usual course of study at the university, and divides it into four schools. 1st. A school for oratory, and the English language. 2d. For history and politics. 3d. For agriculture. 4th. For the military art. Dr Chapman observes, that, "These two plans, so beautifully delineated by the author, and so well calculated for preserving the morals as well as advancing the studies of youth, are designed only for young noblemen and gentlemen of fortune, and could not extend to those children who are born in the middle, or lower ranks of life."

11. The anonymous author of *Proposals for the Amendment of School Instruction*, published in 1772, confines the study of the Latin tongue mostly to gentlement of independent fortune, and such as are to be bred up to the learned professions; and not satisfied with recommending even a superficial knowledge of it to these, substitutes, in its place, the study of the English language, geography, history, &c. according to the plan of Mr Locke, the outlines of which he attempts, though in a very indistinct manner, to fill up, and to accommodate to public, instead of domestic education. "But," as Dr Chapman justly remarks in his *View of Books* "were a judgment to be formed of his own attainments in literature from his stile, he could not be supposed to have had any intimate acquaintance with the classics himself, consequently he could not know that the Latin tongue, exclusive of its other advantages, and of its usefulness to the middle ranks of life, is the best and surest preparation for the knowledge of the English tongue: he could not know that a boy, even of an ordinary capacity, may, from the age of 9 or 10 to 14 or 15 years, be taught to read the classics with ease, and to write the Latin with propriety, and that, by that means and during that period, he may acquire also a more perfect knowledge, not only of the English tongue, but also of geography, history, &c. than he could have done without that assistance."

12. Mr WHITCHURCH, in his *Essay on Education*, published in 1772, makes very sensible observations on the influence of first impressions, and the power of habit, rears the child from his infancy, and, preferring domestic education, places him in the country, under the care of his father, or of a well accomplished and well-bred tutor, who teaches him to read the English tongue by way of amusement; carries him through the Latin

tin, French, and Greek languages, by way of conversation rather than of grammar and dictionaries; and, treating him as a friend and companion, makes use of reasoning rather than authority; mingles music, dancing, reading, and fencing, with his studies; prescribes the authors he is to read till he is 18 years of age; and makes the tour of England with him in his 17th and 18th years, setting out in the spring, appropriating to that purpose 3 months of each year. Mr Whitchurch's ideas are liberal, says Dr Chapman, and his stile is animated and pure.

13. The learned and pious author of *Letters, containing a Plan of Education for Rural Academies*, published in 1773, complains that education does not engage the attention it merits; represents the country as most favourable to the health, the safety, the morals, and the religious training of youth; recommends a plain diet, and a plain, but neat dress; prescribes a course of education from 7 to 11 years of age, to consist of the principles of religion, moral tales, the rudiments of Latin, and elements of Greek, with writing and arithmetic; from 11 to 15, he enjoins perseverance in the study of the classics and of history, with the elements of rhetoric, algebra, and geometry; sends his pupil to the university, if he be designed for any of the learned professions; thinks that the student suffers much from discontinuing his studies during the summer months, and advises him to be sent back to the academy through the summer, to prevent habits of idleness and dissipation, to revise what he had formerly learned, and to prepare for the next course at the university; but, instead of sending him to the university at the age of 15, he detains him at the academy, if he be designed for the service of his country in a civil or military capacity; prescribes a continuation of his former studies, and introduces him to natural history and philosophy; lays down a course of study at the academy for such as are to follow a mercantile employment; proposes a plan for the education of young ladies at a rural academy; and, concludes, with a plan of education in parochial schools, laid down by Mr Fletcher of Salton, who made a figure about the beginning of this century. "This author, says Dr Chapman, insists much on instilling religious and moral principles, and on training the youth of both sexes, by virtuous habits, to the different duties of life."

14. The Rev. Mr WILLIAMS, in his *Treatise on Education*, published in 1774, gives us several strictures on the plans laid down by Locke, Rousseau, and Helvetius, disapproves of the methods generally pursued in this island; and prefers domestic education, conducted by the parents themselves, and founded on affection and the sweetness of daily intercourse. This, he thinks, would supersede the necessity of rewards and punishments. As this plan cannot generally take place in the present circumstances of mankind, every teacher, putting himself in the place of the parent, should strive to engage the affection of his pupils; to rear them up to be his companions as they advance in their studies, and to inspire them with the idea, that the greatest punishment they could suffer would be the displeasure of their teacher. "This

Lock, says Dr Chapman, contains several ingenious observations, and particularly in the chapter on exercises."

15. In 1778, the learned and ingenious Dr PRIESTLEY published his *Miscellaneous Observations on Education*. Of this work, Dr Chapman, in his Appendix to his *Treatise on Education*, gives the following outlines: "Dr Priestley (says he) states the difference between natural and artificial education; represents religion, as the first and universal object; and delineates the other objects of education according to their importance; advises the knowledge of things as well as words to be communicated along with the classics; and the study of geography and history, civil and natural, with something of experimental philosophy, to be carried on at the same time; compares public and private education; prefers a middle way, where a few young gentlemen may meet periodically, and perform certain exercises in common, and receive honorary distinctions, adjudged by ballot; thinks that children should be very cautiously introduced to mixed company, and that they should be put on their guard against the wickedness and profligacy of the age; recommends absolute submission to proper authority; thinks that correction should be administered with sufficient marks of displeasure; that emulation ought to be roused and kept alive by vigorous contests in every mode of exertion; that there ought to be frequent intercourse between parents and children, to strengthen their mutual affection; that religious impressions are of the greatest importance in early life, and that, if neglected, they are seldom acquired afterwards; that double care should be taken to instil a just sense of religion into opulent youth, and to teach them the different branches of natural knowledge, with a competent skill in the liberal arts; that they should be trained to a punctual payment of their debts and fulfilment of their promises; that they should be instructed in the true use of wealth and power, and formed to a true dignity and independence of mind, superior to insolence on the one hand, or servility on the other; that, in the middle station of life, children should be taught, that regular labour, in the exercise of some useful employment, is necessary to the true enjoyment of life; that to acquire a fortune by honest industry is the best means of enjoying it; that their intervals of leisure should be employed in reading history and the general principles of philosophy and astronomy, &c. that the daughter should be trained to genteel employment, which will supply the want of a fortune; that, in both these stations, the youth ought to be accustomed to do as much as possible for themselves, that they may not be subjected to a dependence on servants, and to intimacies with them; and that, in the lowest ranks, children should be taught to read and write; and trained to habits of industry, sobriety, honesty, and contentment of their lot; and to a firm belief of the wisdom and goodness of Providence. He advises foreign travel to be postponed till the age of 25 after a man is married, and has been acquainted with the face and constitution of his own country; and would have young men taught respect for the women in general, and young women cautioned in regard to the men. He annexes Con-

deration.

designed for the use of Young Men, in which he paints, in the strongest colours, the guilt and pernicious consequences of irregular amours; and he concludes with a very sensible *Essay on a course of Liberal Education for civil and active life*, first published in 1760, and proposes that the course should begin at the age of 15 or 16, and consist of lectures, 1st. On civil history and civil policy, such as the theory of laws, government, manufactures, commerce, naval force, &c. 2d. The History of England. 3d. On its constitution and laws; and he gives a syllabus of lectures on the said subjects, delivered by himself in the academy at Warrington.

In 1775, the Abbe DE CONDILLAC, published a *Course of Study for the Instruction of the Prince of Parma*: in 12 vols. It was printed in France, at the royal printing office, Parma. "In this celebrated work" (says Dr Chapman) "the author gives his royal pupil an accurate and beautiful analysis of the human mind; explains the different ideas and the manner in which they are formed; shews the necessity of precision in our ideas, and in the use of words; forms his pupil to think, to reason, to instruct himself; conducts him through a complete course of study; finds that almost all ideas are similar to those contained in the foregoing" (Dr Chapman's) "Treatises; and by a simple and ingenious process, adapts his instructions to the gradual progress of the mind."

In 1777, Dr ASH published *Sentiments on Education, collected from the best authors, with occasional observations*: in 2 vols 12mo. Lond. Vol. 1. contains instructions and observations; on teaching to read; grammar; writing; drawing; arithmetic; geometry; geography; astronomy; chronology; music; rhetoric; a course of reading; public speaking; trade and commerce. Vol. 2. treats of female accomplishments; of modesty; the passions; epistolary correspondence; subordination in society; behaviour in social and civil life; love and marriage; management of a family; and religion.

In 1777, the rev. Dr BAHRDT published, in Dutch, at Frankenthal, *A Plan of Philantropic Education; with an Appendix, giving an Account of the Leiningen Academy at Heideheim, near Worms, on the Rhine*, 8vo. The plan of Dr Bahrtdt, who is the founder of this institution, is highly approved of by the editors of the *Monthly Review*, for May 1778. "Our author, (say they) treats first of the character and singularities of this institution, then of the part of education, which tends to render the body more perfect. He does not go so far back as Rousseau in his *Emilius*, who watches his pupil before he is born; but he supposes the children of his school, from 6 years of age upwards to 14, and recommends for obtaining and preserving a healthy constitution, and good principles, cleanliness in regard to dress and beds, exercise, cold bath, fresh air, and proper diet.—What is said on these points is very just, and we wish that these rules were strictly adhered to, in every school. The subject of another chapter is, the forming of the morals and manners of children. The constant tuition under the eye of a great number of approved masters and tutors,

must undoubtedly contribute much to keep them in order, and to make them employ their time in an useful manner, which in most of our schools is greatly wanting. The 4th chapter treats of the manner in which the children are instructed. This instruction is given according to their capacities, and their different destinations in life. Modern languages, as well as the Latin, though taught by grammatical rules, are yet more acquired by conversation, since there are, for different days of the week, different languages to be spoken. The lessons, of which 10 or 11 are daily given, last only 3 quarters of an hour. A lesson of the serious kind is always succeeded by another, fitted for rousing the mind or body, such as dancing, drawing, music, fencing, &c. it being deemed impossible, that children should pore over their books for three or four hours together, without growing stupid or sleepy. The Socratic method of teaching, which is used in this school to instruct children, and which has proved so successful, is described in a chapter by itself, and illustrated by proper examples. Many are of opinion, that this way of teaching should be adopted in all schools; as it is supposed that a deal of time might by this means be saved, and instruction be freed from that tediousness, which is felt both by the instructor, and those who are to be instructed.

"The laws of the school, both in regard to tutors and pupils, which are the subject of a long chapter, are founded on a deep knowledge of human nature, a careful examination of other plans of education, and on a just idea of school government, which keeps a proper medium between too great a liberty, which leads to licentiousness, and an austerity, which seems to be calculated for educating slaves. This chapter is closely connected with another, which gives an account of punishments and rewards, the scholastic senate, and the court of judicature at this academy. We shall only observe, that all sorts of blows, and all *harsh treatment*, are excluded from these punishments, and that almost all their plays or amusements have a tendency to improve both body and mind, and seem to be lessons without having the appearance of them."

In 1778, M. VERDIER published at Paris, *A course of Education for Employments in the first Rank of the State, &c. with an Universal Plan of Study, and General Rules for a Public Seminary*. This work is recommended, in the *Monthly Review* for October 1778, as "a most comprehensive, philosophical, and circumstantial view of education, and the result not only of theory and speculation, but of observations and experiments, made in a public seminary during the space of 20 years, on persons of different geniuses, constitutions and characters."

20. The rev. Mr KNOX, in his *Liberal Education, or Practical Treatise on the methods of acquiring useful and polite learning*, published in 1781, prefers public education for boys, and domestic, with little exception, for girls; condemns the use of translations, and editions of the classics with notes; insists on industry and the diligent use of dictionaries in schools; enjoins the rules of Lily's Grammar, and large portions of the best classics to be got by heart,

heart, with the writing of exercises, and the composition of themes in English and Latin, and in verse as well as prose, according to the practice of the best schools of England; advises that there be public rehearsals by the elder scholars once every week from the best English and Latin authors, and public examinations at short intervals: insists on a judicious and well supported discipline in schools; and makes many just and ingenious observations on cultivating the minds of both sexes, &c. Dr Chapman says, Mr Knox's style is so accurate and elegant, that it may be said to be truly attic.

21. The learned and ingenious Lord KAMES, in his *Loose Hints on Education*, published in 1781, after a very sensible introduction, enjoins absolute submission to the authority of parents and tutors, as the foundation of all improvement; gives very proper directions for the three stages of childhood; shews the great importance of religious impressions in early life: and annexes very beautiful illustrations of religion, both natural and revealed. In his instructions concerning the culture of the head, he advises to shew children the benefit of knowledge, in order to inspire them with the desire of it; to make their studies, at first an amusement to them; to take the simplest methods of instructing them; to encourage them by variety, or change of subject; to accustom them to recite stories they have heard or read; and to draw morals from fables to form them to a proper style, by teaching them to arrange the same sentence differently; to make their studies and their diversions a relief to each other; to prolong domestic education till they have acquired a firmness of mind to resist temptations to vice; to encourage them to carry on an epistolary correspondence with their friends; to give them an early stock of ideas as well as a taste for reading; and, in opposition to M. Rousseau, to introduce them, but in the simplest manner, to an early acquaintance with fables, geography, history, &c. "Lord Kames's Hints," says Dr Chapin, "do equal honour to his head and his heart."

22. In 1783, M. PHILIPPON de la Magdelaine, published at Besançon, in the department of Doubs, *Patriotic Views on the Education of the People*: in French, 8vo. In the *Monthly Review* for 1784, vol. 70, this treatise is recommended as "a work which merits attention, as it extends to those of the lower and most useful classes. It is, in other respects, said to be a valuable performance, as it throws new lights on the theory of education, considered in this point of view."

23. In 1783, Mr WEBB published an *Essay on Education, with his mode of Teaching at Odiham, Hants*; in 8vo. This work is recommended in the *English Review*, vol. 2. for 1783.

24. In 1784, Mr R. SHEPHERD published *An Essay on Education*; in 4to; wherein he recommends private tuition, on a new and improved plan, in opposition to the great schools.

25. In 1784, *The Children's Friend*, by Mr BERQUIN, was published in 6 vols 12mo, by Cadell and Elmsly, London. "In these delightful little volumes, the philanthropic author shews himself to be well acquainted with the springs of the human heart, and with the finer feelings of our

nature; and strives to form the minds of children of both sexes, to the most amiable virtues, by exhibiting, in an easy and agreeable style, different characters and various adventures adapted to the early period; and with a beautiful simplicity, cites the fine emotions of humanity, sympathy, gratitude, generosity, and nobleness of spirit. It is impossible to read these little histories without crying on various occasions." Dr Chapman justly observes, however, in a note, "It is not that any faulty sentiment should steal into a work of such merit. In vol. 4, p. 146, Frederic, a heroic character, tells a lie, with a good design, but unnecessarily, and without any advantage from the author. In vol. 5, p. 120, Alina, with as little necessity, gives a contradictory account of her brother Constantine, unnecessary by the author. Truth is so sacred a thing, and so important to society, that few cases indeed, can happen, which will justify the violation of it."

26. The rev. J. C. F. RIST, minister at Nienburg published at Hamburg, *Instructions for the Teachers of Lower Schools*, in High Dutch; which the *Monthly Review* for 1784, this work is approved, and is said to contain "very useful practical rules for the management of young persons both as to their mental improvement, and their health and morals."

27. In 1785, PETER WILLIAMS, A. M. published at Oxford, *Letters concerning Education, dressed to a Gentleman entering at the University*, 8vo. The authors of the *Critical Review*, 1785, vol. 60, say of this work, "The letters before us appear well calculated, not only to prevent the first onset, but to regulate each progressive step, from his entrance on the academic world to its termination on the confines of a peaceful world."

28. In 1785, Dr S. PARR, published in *the Discourse on Education, and on the plans pursued in Charity Schools*; which, say the Editors of the *Critical Review*, vol. 60. "contains many important observations, delivered in a manly and elegant style."

29. Dr CHAPMAN, in his *View of Books published on Education*, annexed to the 5th edition of his *Treatise*, (which we have already repeatedly mentioned) mentions, "The History of Sandford and Merton: a work intended for the use of children;" published by Stockdale, in 2 vols 12mo 1786. Dr Chapman, after giving the outline of this little History, (for which we shall refer to his *Treatise*), adds, "In this book, there are many useful hints to parents, and many proper lectures and warnings for children."

30. In 1787, ALEXANDER CÆSAR CHANES, professor in the Academy of Laufens Switzerland, published *Essays on Intellectual Education, with the Outlines (Projet) of a New System*. "This ingenious author," says Dr Chapman "shews in the first part of his work, that he is well acquainted with the human mind, and the manner in which it is originally from nature; shews what steps men have taken to draw their knowledge from that source; how they have distributed it into different branches, called sciences, and taught them in a syncretical way, and how insufficient that method is for the instruction of inexperienced children."

proposes, as a remedy, the study of antiquity, of the theory of language, and of a *New Science*, which he calls ANTHROPOLOGY, or the *General Science of Man*; as endued with sensibility and activity; as compounded of a material body, and an immaterial soul; as possessed of intellectual and moral powers, and of the faculty of speech; as destined for society, and distributed into different communities, employed in providing for their wants and various tastes: He adds several observations on language, and recommends a vocabulary, to consist of primitives from different languages, which have any resemblance to one another, as the foundation for an UNIVERSAL GRAMMAR.

In the 3d part, where he treats of defects and mistakes in the common methods of instruction, he complains, that men take great pains to instruct children in words instead of things; in words explained and beyond their comprehension; that they ought to instruct them sufficiently in their mother tongue, before they teach them the ancient languages; that they teach the Latin before Greek, which, he thinks should be *first* taught, as a link between the ancient and modern tongues, and as a proper preparation for the rest; that they instruct them in abstract and general terms, contained in grammars and dictionaries; that they employ them in writing verbal sentences before they are properly prepared for it; and in reading the most elegant and famous authors, whose style and subjects are far above the confined ideas of children: and that they are indeed loaded with words, but with judgments unexercised and unimproved. He gives general rules; and as the body is trained by proper food and proper exercise, and general and graceful habits, he requires that the mind should be trained up in like manner, and efforts of nature assisted by useful and suitable education, not by abstract and general rules, but by association of ideas, by words easy to be understood, by facts, by observations on sensible objects, by accustoming children to think, by enabling them to instruct themselves, by exciting their curiosity, and inspiring them with a desire of improvement.

He annexes the plan of an academy, or college, to be conducted on the foregoing principles, composed of 10 classes: he appoints a professor for each class; &c.—and by a singular arrangement postpones the study of the Greek tongue till the student has passed through his 17th year, and the Latin, till he has gone through the different branches of philosophy, and completed his 20th year. He concludes with the regulations to be put down, the means to be used, and the advantages to be expected from this institution."

31. The celebrated Mr JEFFERSON, present Vice-president of the United States of America, has inserted in his *Notes on the State of Virginia*, published in 1787, the following *Plan of Education*,—which we suppose has been since established by law in that republic. "Another object of the revival is, to diffuse knowledge more generally through the mass of the people. This bill proposes to lay off every county into small districts of 5 or 6 miles square, called *Hundreds*, and in each of them to establish a school for teaching reading, writing, and arithmetic. The tutor to be supported by the hundred, and every person in it to send their children three years *gratis*, and as much longer as they please, paying for it. These schools to be under a visitor, who is annually to chuse the boy of the best genius in the school, of those whose parents are too poor to give them further education, and to send him forward to one of the grammar schools, of which 20 are proposed to be erected in different parts of the country, for teaching Greek, Latin, geography, and the higher branches of numeral arithmetic. Of the boys thus sent in any one year, trial is to be made at the grammar schools one or two years, and the best genius of the whole selected, and continued 6 years, and the residue dismissed. By this means 20 of the best geniuses will be reared from the rubbish annually, and be instructed at the public expence, so far as the grammar schools go. At the end of 6 years instruction, one half are to be discontinued, (from among whom the grammar schools will probably be supplied with future masters); and the other half, who are to be chosen for the superiority of their parts and dispositions, are to be sent and continued 3 years, in the study of such sciences as they shall chuse, at William and Mary College, the plan of which is proposed to be enlarged, as will be hereafter explained, and extended to all the useful sciences. The ultimate result of the whole scheme of education, would be the teaching of all the children of the state reading, writing, and common arithmetic: Turning out ten annually of superior genius, well taught in Greek, Latin, geography, and the higher branches of arithmetic: Turning out ten others annually of still superior parts, who to those branches of learning shall have added such of the sciences as their genius shall have led them to: The furnishing to the wealthier part of the people convenient schools, at which their children may be educated, at their own expence. The general objects of this law are to provide an education adapted to the years, to the capacity, and the condition of every one, and directed to their freedom and happiness. Specific details were not proper for the law. These must be the business of the visitors entrusted with its execution," &c.

32. The rev. WEDDELL PARSONS, A. B. published

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Many objections arise to this part of Prof. Chavannes's plan. The form for instance of the Greek letters, excepting a few of the capitals, are totally different from all the modern letters now in use; the complicated and arbitrary forms of the Greek numerals; the still more troublesome multitude of contractions in the article, with all its declensions; the three numbers of the nouns in the Greek, the three voices in the Latin, the difficulty of ascertaining the precise meaning of the medial voice, and of the paulo post and paulo ante, &c. and above all, its great variety of dialects, concur to show the propriety of teaching the Latin language first, in which none of these difficulties occur.

lished in 1788, *Essays on Education*, wherein (say the Critical Reviewers, vol. 60.) he "recommends public schools, with a monitor in the hours of absence, and a classical education, with a due attention to genius; shews the importance of discriminating geniuses, and proposes the establishment of a seminary for indigent genius."

33. Mr J. T. PHILIPPS, formerly preceptor to the D. of Cumberland, published 4 editions of *A Compendious Way of teaching Ancient and Modern Languages*, formerly practised by the learned Tanaquil Faber, and now, with little alteration, successfully executed in London. With Observations of Roger Ascham, Richard Carew, Mr Milton, Mr Locke, and Mr Clarke. With an Account of the Education of the Dauphin, and of his sons, the Dukes of Burgundy, Anjou, and Berry; and the Marchioness of Lambert's Letter to her Son. Also an Essay on Rational Grammar, and proposals for a new Method of Education; likewise the original Letter of Cardinal Woolsey to the Masters of his Schools, at Wywich, with an English Translation. "The Introduction to this collection, (says Dr Chapman,) mentions the method by which Montaign was taught the Latin tongue, from his infancy, by a tutor, and assistants, and allowed to hear no other language spoken: also a method proposed by Mr Cowley, for teaching the knowledge of things, and of different parts of nature, by a book composed of detached pieces of Latin authors; such as Varro, Cato, Columella, Pliny, Celsus, Seneca, Cicero, Virgil's Georgics, Grotius, Manilius; and it recommends *Examen de la Maniere d'enseigner le Latin aux Enfants par le seul usage; a Paris, chez J. Baptiste Corenior, 1668*; translated into English, and printed in London, 1669.

"Mr Philipps then gives us T. FABER's method written by himself, who thought it sufficient to teach his son to read well and write a legible hand, till he was near ten years old. Then he began to teach him Latin, with the Greek alphabet, and merely to read a Greek author with ease, and gave him an exercise of that kind once a week." Here Dr Chapman gives the particulars of Faber's method, for which we must refer to the Dr's Treatise; after which he adds, "Mr PHILIPPS's method accords with T. Faber's in general; after shewing his pupil, that the great object of language is to communicate knowledge, and to instil virtuous sentiments, he explains the different parts of speech; and making them well acquainted with their accidents, he proceeds to a book called *Janua Linguarum*, then to Castalio's Latin Testament, Terence, Justin, Q. Curtius, Florus; accustoms him to an open pronunciation of the Latin tongue; makes use of double translations, i. e. from English to Latin, as well as from Latin to English; teaches the prose authors before the poet; makes them acquainted with the terrestrial globe, maps, chronology, Tursellin's Universal History, and Sir W. Raleigh's History of the World; reads but one book at once; uses no grammar till his pupil is well instructed in the language; carries him through the Greek, Hebrew, French, Italian, and Spanish languages; gives him a short system of rhetoric, with the logic of Ra-

mus and Alstedius; instructs him in the principles of the Christian religion, and, like Faber, praises and encouragements, not blows."

"ROGER ASCHAM, (continues Dr Chapman) recommends double translations from the authority of Pliny and the example of Q. Elizabeth RICHARD CAREW proposes to teach the Latin tongue by conversation, and by reading authors rather than by the rules of grammar. Mr CLAU puts little value on the study of the Latin poet and condemns the composition of Latin verse MILTON's and LOCKE's systems are generally known, and their most useful instructions interwoven with the 2d part of the preceding Treatise." (Dr CHAPMAN's.)—"The Essay on Universal and rational Grammar, is itself very rational and proper.

"The proposals for a New Method of Domestic Education advise a convenient house to be taken, with a garden, in the neighbourhood of London, where the pupils may not exceed 12, have two tutors, and may hear nothing but Latin." Dr Chapman also gives his remarks of Woolsey's Letter, and the other parts of the collection.

34. In 1790, the celebrated Mrs CATHERINE MACAULEY GRAHAM published *Letters on Education, with Observations on Religious and Moral Subjects*. "Mrs Macauley (says Dr Chapman) "attentive to the bodies as well as the minds of children, recommends a moderate and plain diet, to consist chiefly of milk, fruit, eggs, and vegetables; with the moderate use of sugar; prescribes pure gravy to be taken now and then, a corrector of acidities; disapproves of the use of young animals, of warm liquors, warm beds and warm night-caps, and of shoes and stockings for the first 6 years; advises boys and girls to be brought up together at first; the linen to be worn on cold; thin clothing and the cold bath to be used, and the mouth to be washed with cold water after meals; recommends some handicrafts, such as sewing for boys, and needle-work for girls, with ball once a week, but not to late hours; disapproves of music not to be carried to excess; instruction to be rendered agreeable; due articulation to be taught, but no declamation; the imagination not to be frightened with the tales of sorcery, witches, or ghosts; contentment with present objects to be encouraged, and gentle satisfactions to be preferred to high and rapturous enjoyments, and grand shows and birth day amusements; such as sweet-meats or fine cloaths to be given as rewards; advises habits of independence to be studied, and present satisfactions to be sometimes interrupted in order to prepare the mind for sudden transitions; promises to be performed or compensated by lying to be discouraged, and no temptations to be thrown in the way, and bigotry, enthusiasm, and infidelity to be guarded against; recommends to be taught plain and short prayers, such as the Lord's prayer with hymns;" &c.

35. In 1791, the following work was published at London, by H. Gardiner, Strand:—"The Spirit of the Times. By SIMON SEARCH. Containing an Enquiry into the Utility of a Knowledge of the Latin and Greek Languages, as a Branch of a Liberal Education."

Education; with Hints of a Plan of a Liberal Education without them. Also thoughts upon the punishments which are proper for them. By Dr RUSH of Philadelphia."

"In this Enquiry (says Dr Chapman) the author complains of the difficulty of acquiring the Latin and Greek languages, and the little pleasure which accompanies the study of them in early life; and objects to them as occasioning the principal obstacles to teaching in masters, and learning in scholars; as disgusting many boys, and stifling excellent capacities for useful knowledge, and drawing them to low company and improper conduct; as hurtful to morality and religion, by the dissolute amours and shocking vices both of school and men, with which they abound; or by the horrors of murders perpetrated by kings, and related in such a manner as to excite pleasure and admiration; as inspiring a passion for the military character; as confining education to a few persons; as obstructing the cultivation and perfection of the English language, and the propagation of useful knowledge; as unsuitable to the age in which we live; an age, in which knowledge is drawn from its dead repositories, and diffused by the art of printing in living languages through the whole world; an age in which, instead of public prayers and wars, the business of preceding centuries, manufactures and commerce afford very different, and very profitable employments for mankind. He recommends the following advantages as immediately attending the rejection of the Latin and Greek languages, viz. That it would purify and improve the English language; that it would produce a revolution in science, and in human affairs; that it would tend to destroy the prejudices of the common people against schools and colleges; that it would banish pride from our seminaries of public education; that it would increase the number of students in our colleges; and thereby extend the benefit of education through every part of the country, and that it would remove the present unequal disparity between the two sexes, in the degrees of their education and knowledge; and he proposes, that the knowledge of the two languages should be preserved like the knowledge of the art of medicine, as a distinct profession; and that the persons who devote themselves to the study of these languages should be called *Linguists* or *Interpreters*, and that they should be paid for their translations and explanations of the Latin and Greek classics, and other compositions in those languages.

"In place of the Latin and Greek languages he proposes, that the first 8 years of a boy's time be employed in learning to speak, to spell, and to read and write the English language; that he be committed to the care of a master, who speaks naturally at all times, and that the books he reads be written in a simple and correct style; that he be taught grammar by the ear, and by conversation with the master, who should hear his pupils read, and mark and correct every deviation from grammatical propriety which they utter; that he be taught natural history, and by prints, where a deficiency is wanting; then geography; and that these two fundamental branches of knowledge employ him for 4 years; that he be then instructed in the

French and German languages, by the ear, and not before he be 12 years of age; that arithmetic and some of the more simple branches of the mathematics be acquired between the 12th and 14th year of his life; that between the 14th and 15th year he be carried through grammar, oratory, criticism, the higher branches of the mathematics, philosophy, chemistry, logic, metaphysics, chronology, history, government, the principles of agriculture and manufactures, and of every thing else, that is necessary to qualify him for public or private happiness; and that, along with these branches of literature, he be early and steadily instructed in the principles of the Christian religion; that the government of schools be strict, in order that it may not be severe; that the scholars be not confined too long in one place, nor too many crowded together in one room; and that no corporal punishments of any kind be inflicted; that private admonition be first tried; when this fails, that recourse be had to solitude, to confinement after school hours, to low diet, to darkness, to the holding of a sign of disgrace in the presence of the school, and last of all to expulsion.

"He mentions the amusements proper for youth at school; such as, skating, swimming, cultivating a garden, or small spot of ground, or mechanical operations; and proposes that the amusements consist of such exercises, as would be most subservient to their future employment in life."

"In analysing this pamphlet (says Dr Chapman,) which has been published under the name of Dr Rush, I have for the most part used the author's own expressions. I wished his meaning to be clearly ascertained. The objections which he has thrown out apply not to the classics in general, but to the indolent and preposterous method which has been so often pursued in teaching them, and to some of them that deserve not to be taught at all."

After several other judicious reflections, for which we shall refer to the Doctor's Treatise, (and which we have the less occasion to quote, as we have enlarged pretty much on the subject, in SECT. VI. PART I. and SECT. XIV. PART II.) he adds, "It is acknowledged at the same time, that the course of instruction, which the author of the Enquiry has substituted in place of the Latin and Greek classics, is well adapted to children in general, and to those within the United States, in particular, if it be properly and seasonably taught; but a little reflection will shew that his plan is imperfect, and that the Latin tongue is a more proper vehicle of science than the English, or any other modern and fluctuating language can possibly be."

36. In 1792, Dr GEORGE CHAPMAN published the 5th edition, improved and enlarged, of his *Treatise on Education, in two parts. With the Author's Method of Instruction while he taught the School of Dumfries; and a View of other Books on Education*. Having already given sufficient specimens of this useful Treatise, in the various quotations above taken from it, we need hardly repeat our opinion, that we think it the most complete work on the subject, and the best adapted for practice, in this country at least, of any, that we have yet met with.

Several other works on Education have been published within these six years, by Messrs GOD-

WIN, FLORIAN, KING, LANE, &c. which we cannot take particular notice of, without enlarging this article beyond all bounds: but there is one upon the Education of WOMEN, written by the late MRS GODWIN, the ci-devant Miss MARY WOLLSTONECRAFT, so truly original, or rather *eccentric*, that many of our readers might think it an unpardonable omission not to mention it. We therefore subjoin the following extract from the account given of the 1st part of that work in the *Monthly Review*, for June 1792.

37. "*A Vindication of the Rights of Woman: With Strictures on Moral and Political Subjects.* By Mary Wollstonecraft, 8vo.

"Philosophy, which, for so many ages, has assumed the indolent recluse with subtle and fruitless speculations, has, at length, stepped forth into the public walks of men, and offers them her friendly aid in correcting those errors, which have hitherto retarded their progress toward perfection, and in establishing those principles and rules of action, by which they may be gradually conducted to the summit of human felicity. Enveloped as mankind at present are with the mists of prejudice, and encumbered on every side with institutions and customs, which prevent the free expansion of their intellectual and moral powers, it is the interest of private individuals, and the duty of those who are entrusted with the care of the public welfare, wherever, or in whatever character, this divine Instructor appears, to give her an honourable reception, and an attentive hearing. Among the most enlightened people of antiquity, Wisdom, as well as Beauty, was deified under a female form; and in modern language it is still usual to give Philosophy and Wisdom a female personification. What is this but a tacit concession in favour of the female part of the species, that they are no less capable of instructing than of pleasing?—and how jealous soever we may be of our right to the proud pre-eminence which we have assumed, the women of the present age are daily giving us indubitable proofs that mind is of no sex, and that, with the fostering aid of education, the world, as well as the nursery, may be benefited by their instructions.

"In the class of philosophers, the *author* of this treatise—whom we will not offend by styling, authors—has a right to a distinguished place. The important business, here undertaken, is to correct errors, hitherto universally embraced, concerning the female character; and to raise woman, from a state of degradation and vassalage, to her proper place in the scale of existence; where, with the dignity of independence, she may discharge the duties and enjoy the happiness of a rational Being. The fundamental principle, on which the whole argument of this work is founded, is that, except in affairs of love, sexual distinctions ought to be disregarded, and women be considered in the light of rational creatures; who, in common with men, are placed in this world to unfold their faculties, and whose first object of ambition ought to be to obtain a character as a human Being. It is acknowledged that more attention has lately been paid to the education of women than formerly: but it is at the same time maintained, that the method, in which they are commonly educated, on-

ly tends to enfeeble both the body and the mind, and to render them insignificant objects of desire. In order to correct this error, which is considered by Miss Wollstonecraft as a gross violation of justice against one half of the species, and as prolific in mischief to the whole: and after some general observations on the rights and duties of human beings, and of the causes of the present imperfect state of human society; the prevailing opinion of a sexual character is discussed, and its influence on female education and manners is, with equal solidity of reasoning, and strength of colouring, represented at large. From a great variety of just observations and bold reflections on this subject, we select the following:—"

"Many are the causes that, in the present corrupt state of society, contribute to enslave women by cramping their understandings and sharpening their senses. One, perhaps, that silently does more mischief than all the rest, is their disregard of order.

"To do every thing in an orderly manner, is the most important precept, which women, who, generally speaking, receive only a disorderly kind of education, seldom attend to with that degree of exactness, that men, who from their infancy are broken into method, observe. This negligent kind of guess-work, for what other epithet can be used to point out the random exertions of a sort of instinctive common sense, never brought to the test of reason? prevents their generalizing matters of fact—so they do to day, what they did yesterday, merely because they did it yesterday.

"This contempt of the understanding in early life has more baneful consequences than is commonly supposed; for the little knowledge, which women of strong minds attain, is, from various circumstances, of a more desultory kind than the knowledge of men, and it is required more by sheer observations on real life, than from comparing what has been individually observed with the results of experience generalized by speculation. Led by their dependent situation and domestic employments more into society, what they learn is rather by snatches; and as learning is with them in general, only a secondary thing, they do not pursue any one branch with that persevering ardour necessary to give vigour to the faculties, and clearness to the judgment. In the present state of society, a little learning is required to support the character of a gentleman; and boys are obliged to submit to a few years discipline. But in the education of women, the cultivation of the understanding is always subordinate to the acquirement of some corporeal accomplishment; even while enervated by confinement and false notions of modesty, the body is prevented from attaining that grace and beauty which relaxed half-formed limbs never exhibit. Besides, in youth, their faculties are not brought forward by emulation; and having no serious scientific study, if they have natural sagacity it is turned too soon on life and manners. They dwell on effects, and modifications, without tracing them back to causes; and complicated rules to adjust behaviour, are a weak substitute for simple principles.

"As a proof that education gives this appearance of weakness to females, we may instance the example

example of military men, who are, like them, sent into the world before their minds have been stored with knowledge or fortified by principles. The consequences are similar; soldiers acquire a little superficial knowledge snatched from the muddy current of conversation, and, from continually mixing with society, they gain what is termed a knowledge of the world; and this acquaintance with manners and customs has frequently been confounded with a knowledge of the human heart. But can the crude fruit of casual observation, never brought to the test of judgment, formed by comparing speculation and experience, deserve such a distinction? Soldiers, as well as women, prize the minor virtues with punctilious politeness. Where is then the sexual difference, when the education has been the same? All the difference that I can discern, arises from the superior advantage of liberty, which enables the former to do more of life.

“The folly of the present mode of female education is well exposed in the contrasted pictures of a woman formed after the fashionable model, and another educated on rational principles, in the trying situation, when she is left with a large family, without her accustomed guide and protector.—

“In the same spirited way does this writer proceed to exhibit, in many particulars, the state of degradation to which woman is, by various causes, reduced. The consequence of supposing that the chief end of her existence is to please the other sex, is forcibly described.—

“How incompletely the acquisition of the exterior accomplishments, without intellectual attainments, qualifies a woman for domestic life, is thus represented:—

“With respect to women, when they receive a careful education, they are either made fine ladies, brimful of sensibility, and teeming with capricious fancies; or mere notable women. The latter are often friendly, honest creatures, and have a shrewd kind of good sense joined with worldly prudence, that often renders them more useful members of society than the fine sentimental lady, though they possess neither greatness of mind nor taste. The intellectual world is shut against them; and they stand still; the mind finding no employment, for literature affords a fund of amusement which they have never sought to relish, but frequently to despise. The sentiments and taste of more cultivated minds appears ridiculous, even in those whom chance and family connections have led them to love; but in mere acquaintance they think it all affectation.

“A man of sense can only love such a woman on account of her sex, and respect her, because she is a trusty servant. He lets her, to preserve his own peace, scold the servants, and go to church in clothes made of the very best materials. A man of her own size of understanding would, probably, not agree so well with her; for he might wish to encroach on her prerogative, and manage some domestic concerns himself. Yet women, whose minds are not enlarged by cultivation, or the natural selfishness of sensibility expanded by reflection,

are very unfit to manage a family; for, by an undue stretch of power, they are always tyrannizing to support a superiority that only rests on the arbitrary distinctions of fortune. The evil is sometimes more serious, and domestics are deprived of innocent indulgences, and made to work beyond their strength, in order to enable the notable woman to keep a better table, and outshine her neighbours in finery and parade. If she attend her children, it is, in general, to dress them in a costly manner—and, whether this attention arises from vanity or fondness, it is equally pernicious.

“Besides, how many women of this description pass their days, or, at least, their evenings, discontentedly. Their husbands acknowledge that they are good managers and chaste wives; but leave home to seek for more agreeable, may I be allowed to use a significant French word, *piquant* society; and the patient drudge who fulfils her task, like a blind horse in a mill, is defrauded of her just reward; for the wages due to her are the caresses of her husband; and women who have so few resources in themselves, do not very patiently bear this privation of a natural right.

“A fine lady, on the contrary, has been taught to look down with contempt on the vulgar employments of life; though she has only been incited to acquire accomplishments that rise above sense; for even corporeal accomplishments cannot be acquired with any degree of precision unless the understanding has been strengthened by exercise. Without a foundation of principles, taste is superficial; and grace must arise from something deeper than imitation. The imagination, however, is heated, and the feelings rendered fastidious, if not sophisticated; or, a counterpoise of judgment is not acquired, when the heart still remains artless though it becomes too tender.”

“These women are often amiable; and their hearts are really more sensible to general benevolence, more alive to the sentiments that civilize life, than the square-elbowed family drudge; but, wanting a due proportion of reflection and self-government, they only inspire love; and are the mistresses of their husbands, whilst they have any hold on their affections; and the platonic friends of his male acquaintance. These are the fair defects in nature; the women who appear to be created not to enjoy the fellowship of man, but to save him from sinking into absolute brutality, by rubbing off the rough angles of his character; and by playful dalliance to give some dignity to the appetite that draws him to them.—Gracious Creator of the whole human race! hast thou created such a being as woman, who can trace thy wisdom in thy works, and feel that thou alone art by thy nature exalted above her,—for no better purpose?—Can she believe that she was only made to submit to man, her equal; a being, who, like her, was sent into the world to acquire virtue?—Can she consent to be occupied merely to please him; merely to adorn the earth, when her soul is capable of rising to thee?—And can she rest supinely dependent on man for reason, when she ought to mount with him the arduous steps of knowledge!—

“The sum of our fair philosopher’s doctrine concern—

concerning the degradation of the female character, is, that it springs entirely from the want of a due cultivation of the rational powers.

"In a distinct chapter, Miss Wollstonecraft animadverts on several writers who have rendered women objects of pity bordering on contempt, particularly Rousseau, Dr Fordyce, Dr Gregory, Barons de Stael, Mrs Piozzi, &c. These strictures are lively, natural, and, for the most part, very judicious: but we must pass them over to leave room for a farther exhibition of this writer's leading ideas.

"The subject of modesty, considered comprehensively, and not as a sexual virtue, furnishes Miss W. with a happy opportunity for much philosophical reflection and eloquent declamation. Modesty is accurately distinguished from humility, and from bashfulness; and is shewn to consist in that purity of mind, which is the fairest fruit of knowledge. It is hence maintained, that those women, who have most improved their reason, have the most modesty.

"This subject is pursued, with a degree of freedom which may perhaps be thought singular in a female, but with a philosophical air of dignity and gravity, which precludes every idea of indecorum, and almost prohibits the intrusion of a smile.

"The pernicious effects arising from the unnatural distinctions established in society, are, in the next place, unfolded in a series of general observations on the present state of society, and particularly applied to the present condition of females. The state of dependance, in which the present laws of society place married women, is shewn to be exceedingly injurious to the female character.

"The importance of a well-cultivated understanding, to the due discharge of the personal duties, is shewn, in a variety of striking particulars; instances are adduced of the folly which the ignorance of women generates; and a plan is offered for the improvement of female education. It proposes that, under a national establishment, day-schools should be provided in every town; in which, elementary instruction of every kind should be given to boys and girls promiscuously. This project has perhaps a better claim to attention than its novelty: let the reader judge:

"To improve both sexes they ought, not only in private families, but in public schools, to be educated together. If marriage be the cement of society, mankind should all be educated after the same model, or the intercourse of the sexes will never deserve the name of fellowship, nor will women ever fulfil the peculiar duties of their sex, till they become enlightened citizens, till they become free by being enabled to earn their own subsistence, independent of men; in the same manner, I mean, to prevent misconstruction, as one man is independent of another. Nay, marriage will never be held sacred till women, by being brought up with men, are prepared to be their companions rather than their mistresses; for the mean doublings of cunning will ever render them contemptible, whilst oppression renders them timid. So convinced am I of this truth, that I will venture to predict that virtue will never prevail in society till the virtues of both sexes are founded on reason; and till the

affections common to both are allowed to gain theirs due strength by the discharge of mutual duties.

"Were boys and girls permitted to pursue the same studies together, those graceful decencies might early be inculcated which produce modesty without those sexual distinctions that taint the mind. Lessons of politeness, and that formula of decorum, which treads on the heels of falsehood, would be rendered useless by habitual propriety of behaviour. Not indeed put on for visitors like the courtly robe of politeness, but the sober effect of cleanliness of mind. Would not this simple elegance of sincerity be a chaste homage paid to domestic affections, far surpassing the meretricious compliments that shine with lustre in the heartless intercourse of fashionable life? But, till more understanding preponderates in society, there will ever be a want of heart, taste, and the harlot's *rouge* will supply the place of that celestial suffusion which only virtuous affections can give to the face. Gallantry, and what is called love, may subvert without simplicity of character; but the main pillars of friendship, respect and confidence—esteem is never founded on it cannot tell what!

"From the copious extracts which we have made from this truly original work, a just judgment may be formed of its merit, than any summary of its leading sentiments which could have given. It will be easily perceived, the author is possessed of great energy of intellect, vigour of fancy, and command of language, that the performance suggests many reflections which well deserve the attention of the public, and which, pursued under the direction of sense and sage experience, may greatly contribute to the improvement of the condition and character of the female world. We do not, however, so zealously adopt Miss W.'s plan for a Revolution in female education and manners, as not perceive that several of her opinions are fanciful and some of her projects romantic. We do see, that the condition or the character of women would be improved, by assuming an active part in civil government. It does not appear to us to be necessary, in order to enlighten the understandings of women, that we should prohibit the ployment of their fingers in those useful and gainful labours of the needle, for which, from the days of Penelope, they have obtained so much deserved applause. Certain associations, now firmly established to be easily broken, forbid us to think, that women are degraded by the trivial attention which the men are inclined to pay them, or that it would be any increase of the pleasure of society, if, 'except where love animates behaviour, the distinction of sex were to be founded.' This distinction, we apprehend, will never be overlooked, till the time arrives, "when we shall neither marry nor be given in marriage but be as the angels of God in heaven." Notwithstanding all this, however, we entirely agree with the fair writer, that both the condition and the character of women are capable of great improvement; and that, by means of a more rational plan of female education, in which a judicious attention should be paid to the cultivation of the

understanding and taste, as well as of their dispositions and manners, women might be rendered at once more agreeable, more respectable, and more happy in every station of life. Both men and women should certainly, in the first place, regard themselves, and should be treated by each other, as human beings. It might, perhaps, in some measure, contribute to this end, if, beside the sexual appellations of man and woman, we had some general term to denote the same species, like *Andros* and *Homo* in the Greek and Roman languages. The want of such a general term is a material defect in our language."

We have inserted the above extracts merely as a specimen of the *Spirit of the Times*, and by no means in the persuasion, that Mrs Godwin's plan is either very proper or practicable; although doubtless judicious parents and teachers may borrow some useful hints from it, for the improvement of female education.

E D W

***EDUCE.** *v. a.* [*educo*, Latin.] To bring out; to extract; to produce from a state of occlusion.—That the world was *educed* out of the power of space, and give that as a reason of its origin: in this language, to grow rich, were to draw money out of the power of the pocket. *Glanville*.—This matter must have lain eternally con-
fined to its beds of earth, were there not this agent to raise it thence. *Woodward*.—

The eternal art *educes* good from ill, Crafts on this passion our best principle. *Pope*.

***EDUCTION.** *n. f.* [from *educe*] The act of bringing any thing into view.

***EDULCORATE.** *v. n.* [from *dulcis*, Latin.] To sweeten. A chymical term.

(1.) **EDULCORATION.** *n. f.* [from *edulcorare*] The act of sweetening.

(2.) **EDULCORATION**, in chemistry, properly signifies the rendering substances more mild. It consists almost always in taking away acids and other saline substances; and this is effected by washing the bodies to which they adhere in a large quantity of water. The washing of diaphoretic mercury, powder of algaroth, &c. till the water comes off quite pure and insipid, are instances of chemical edulcoration.

(3.) **EDULCORATION**, in pharmacy, is merely the sweetening of juleps, potions, and other medicines, by adding sugar or syrup.

EDWALTON, a village in Nottinghamshire.

(1-9.) **EDWARD**, the name of 9 kings of England, viz. of 3 before, and 6 after the Norman conquest; although by a most unaccountable blunder in our English historians, not paralleled in the history of any other nation, only the 6 last are recorded. We blame the historians, not the monarchs, for this blunder; for if the historians of Edward Longshanks and the 3 following Edwards, had added no numbers to their names on their coins, had numbered them properly, it cannot be doubted that Edward the VI. would have filled the place of Edward the IX. on his coins. See **ENGLAND, HISTORY OF**.

(10.) **EDWARD BALIOL.** See **SCOTLAND**.

(11.) **EDWARD**, in geography, a fortification in Washington county, New York, now in ruins. It is situated on the E. bank of Hudson river, about 14 miles S. by E. of Fort George on the northern extremity of Lake George, and 19 S. by W. of Skeneborough, on South bay, an arm of Lake Champlain.

(12.) **EDWARD FORT**, a fort in Nova Scotia, in the town of Windsor, in Hans county, said to be large enough to contain 100 men. It is situated

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on Avon river, which is navigable thus far for vessels of 400 tons; those of 60 tons can go 2 miles higher.

(13.) **EDWARD, KING**, a parish Scotland, in Aberdeen-shire. See **KING-EDWARD**.

EDWARDS, George, F. R. A. S. was born at Stratford, a hamlet of Weltham in Essex, April 34, 1694. Upon leaving school, he was put apprentice to a tradesman in Fenchurch-street, who treated him with great kindness; but about the middle of his apprenticeship, an accident happened, which led young Edwards to follow the proper bent of his genius. Dr Nicolas, a relation of his master's happened to die. The Doctor's books were removed to an apartment occupied by Edwards, who eagerly employed all his leisure hours, both in the day and night, in perusing those on natural history, sculpture, painting, astronomy, and antiquities. The reading of these books entirely deprived him of all inclination for mercantile business, and he resolved to travel into foreign countries. In 1716, he visited the principal towns in Holland, and in about a month returned to England. Two years after, he took a voyage to Norway, at the invitation of a gentleman, who was nephew to the master of the ship in which he embarked. At this time Charles XII. was besieging Frederickshall; in consequence of which, our young naturalist was confined by the Danish guard, who supposed him to be a spy employed by the Swedes. However, upon obtaining testimonials of his innocence, a release was granted. In 1718 he returned to England, and next year visited Paris by the way of Dieppe. During his stay in this country he made two journeys of 100 miles each; the first to Chalons in Champagne, in May 1720; the second on foot, to Orleans and Blois; but an edict happening at that time to be issued for securing vagrants, to transport them to America, as the banks of the Mississippi wanted population, our author narrowly escaped a western voyage. On his arrival in England, Mr Edwards closely pursued his favourite study of natural history, applying himself to drawing and colouring such animals as fell under his notice. A strict attention to natural, more than picturesque beauty, claimed his earliest care: birds first engaged his particular attention; and having purchased some of the best pictures of these subjects, he was induced to make a few drawings of his own; which were admired by the curious, who encouraged our young naturalist to proceed, by paying a good price for his early labours. Among his first patrons and benefactors may be mentioned James O. Theobalds,

Theobalds, Esq; of Lambeth; a gentleman zealous for the promotion of science. Our artist, thus unexpectedly encouraged, increased in skill and assiduity; and procured, by his application to his favourite pursuit, a decent subsistence and a large acquaintance. However, in 1731, in company with two of his relations, he made an excursion to Holland and Brabant, where he collected several scarce books and prints, and saw the original pictures of several great masters at Antwerp, Brussels, Utrecht, and other cities. In Dec. 1733, by the recommendation of the great Sir Hans Sloane, Bart. president of the college of physicians, he was chosen librarian, and had apartments in the college. This office was peculiarly agreeable to his taste and inclination, as he had the opportunity of a constant recourse to a valuable library, filled with scarce and curious books on the subjects of natural history, which he so assiduously studied. By degrees he became one of the most eminent ornithologists in this or any other country. His merit is so well known in this respect, as to render any eulogium on his performances unnecessary: He never trusted to others what he could perform himself; and often found it so difficult to give satisfaction to his own mind, that he frequently made 3 or 4 drawings to delineate the object in its most lively character, attitude, and representation. In 1743, the first volume of his *History of Birds* was published in 4to. His subscribers exceeding even his most sanguine expectations, a 2d volume appeared in 1747. The 3d was published in 1750; and in 1751, the 4th came out. This volume being the last he intended to publish at that time, he seems to have considered it as the most perfect of his productions in natural history: and therefore devoutly offered it up to the great God of nature, in humble gratitude for all the good things he had received from him in this world. See DEDICATION, § 3. Our author, in 1753, continued his labours under a new title, viz. *Gleanings of Natural History*. A 2d volume of the *Gleanings* was published in 1760. The 3d part, which made the 7th and last volume of his works, appeared in 1764. Thus our author, after a long series of years, the most studious application, and the most extensive correspondence to every quarter of the world, concluded a work which contains engravings and descriptions of more than 600 subjects in natural history, not before described or delineated. He likewise added a general index in French and English; which was afterwards perfected, with the Linnæan names, by Linnaeus himself, who frequently honoured him with his friendship and correspondence. Some time after Mr Edwards had been appointed library-keeper to the royal college of physicians, he was, on St Andrew's day, in 1750, presented with an honorary compliment by the president and council of the Royal Society, with the gold medal, the donation of Sir Godfrey Copley, Bart. annually given on that day to the author of any new discovery in art or nature, in consideration of his natural history just then completed. A copy of this medal he had afterwards engraved, and placed under the title in the first volume of his history. He was a few years afterwards elected P. R. S. and E. A. S. London; and also a member

of the academies of sciences and learning in different parts of Europe. In compliment to these honorary distinctions from such learned bodies, he presented elegant coloured copies of all his works, to the Royal College of Physicians, the Royal Society, the Society of Antiquarians, and to the British Museum; also to the Royal Academy of Sciences at Paris, from whom he received the most polite and obliging letter of thanks by their secretary Monsieur Defonchy. His collection of drawings, which amounted to upwards of 900, were purchased by the earl of Bute. They contain a great number of British as well as foreign birds, and other animals hitherto not accurately delineated or described. After the publication of the last work, being arrived at his 70th year, I found his sight begin to fail, and his hand lost its wonted steadiness. He retired from public employment to a little house which he purchased at Plaistow; previous to which, he disposed of the copies, as well as plates, of his works. The conversation of a few select friends, and the use of a few select books, were the amusement of the evening of his life; and now and then made an excursion to some of the principal cities in England, particularly to Bristol, Bath, Exeter, and Norwich. Some years before his death, an alarming depredation of a cancer, which brought all the efforts of physical skill, deprived him of sight of one of his eyes: he also suffered from the stone, a complaint to which at different periods of his life he had been subject. Yet it has been remarked, that, in the severest paroxysms of misery, he was scarcely known to utter a single complaint. Having completed his 80th year, maciated with age and sickness, he died July 11, 1777, much lamented by a numerous acquaintance.

EDWARD'S HALL, a village in Essex, near Great Badlow.

EDWARD'S ISLAND, PRINCE. See PRINCE EDWARD'S ISLAND.

EDWARSTON, a village in Suffolk.

EDWAY, a river of S. Wales, which runs to the Wye, 4 miles SE. of Bealish, in Radnor.

EDWIN, a king of Northumberland, whose dominions extended as far north as the Frith of Forth, and from whom some English antiquaries say EDINBURGH had its name.

EDWIN-LOCK, a village in Worcestershire N. of Bromyard.

EDWIN'S HALL, an ancient ruinous building on Cockburn Law in Berwickshire, so named from EDWIN king of Northumberland, but said to have been originally built by the Picts. It consisted of 3 concentric circles; the diameter of the innermost is 40 feet, the wall 7 feet thick; the space between the innermost and 2d wall, 7 feet, and between the 2d and 3d, 10 feet. The stones very large, and grooved into each other, have never been cemented with mortar.

EDWITH, a river of England, in the county of Monmouth, which joins the Usk, at its mouth.

EDWORTH, a village in Bedfordshire, SE. of Biggleswade.

EDWY, the son of Edmund I. king of England, succeeded his uncle Edred, A. D. 955. The tragical history of this unfortunate monarch and his virtuous queen ELGIVA, reflects an indelible

his on the character of St Dunstan, and shows a lot of monsters here canonized as *saints* in the age of superstition. See ENGLAND.

EDNSAR, a village in the Peak of Derby.

EDNSTONE LIGHT HOUSE. See EDDYSTONE. It was first erected by the corporation of the Trinity-haul in 1596; in consideration of which, the rates, &c. of English shipping agreed to pay one penny a ton outwards and inwards. By act of parliament in the 4th of queen Anne, the same duty on tonnage of ships was granted for its support; which law was enforced on the 8th of June, 1705.

EDZELL, a parish of Scotland, in the NE. corner of Forfarshire, extending about 11½ miles in length, and from 1 to 1½ in breadth. The air is sharp and piercing, but healthy; and longevity is not uncommon. A man died lately aged 100. The soil is various, consisting of black earth, clay, gravel, &c. Oats, bear, pease, turnips, flax, potatoes, and cabbages are the produce. Agriculture is greatly improved within these 30 years. Formerly the land hardly repaid the labour: now the average return is sixfold; and on some fertile spots advances have lately occurred of 16 bolls of wheat, and 20 of bear for one! In 1783, the farmers here had a better crop and more safely got in, than in almost any other part of the country. The population in 1791, stated by the rev. Mr Hutton, in his report to Sir John Sinclair, was 963, and had increased 101 since 1755. The number of sheep was 2000. There are 3 Druidical temples in the parish.

EDZELL CASTLE, an ancient castle in the above parish. Mr Hutton says, "the castle of Edzell is one of the most magnificent ruins any where to be met with. It consists of two stately towers, connected by an extensive wall; and large wings extend backwards from the towers." The Lindays of Edzell are famous in Scottish history.

EEKHOUT, Gerbrant VANDER, history and portrait painter, was born at Amsterdam in 1621, and was a disciple of Rembrandt; whose manner of designing, colouring, and penciling, he imitated so nearly, that it is difficult to distinguish between several of his paintings and those of his master. He painted after nature, and with such a force as only nature can equal: his touch and his colouring are the same as Rembrandt's; but he excelled him in the extremities of his figures. His principal employment was for portraits, wherein he was admirable; but he surpassed all his cotemporaries, in expressing the soul in the countenance. His chief delight, however, was in painting historical subjects, which he executed with equal success. In that style his composition is rich and full of judgment; the distribution of his masses of light and shadow is truly excellent; and in the opinion of many connoisseurs, he had more transparence in his colouring, and better expression, than his master. He died in 1674.

EED, a town of Norway, 24 miles NNW. of Bergenheim.

EEDT, a town of Germany, in the archduchy of Austria, 14 miles ESE. of Ens.

EEL, *n. f.* in bee husbandry, is defined by Mr Bonner, "a part of an old hive cut down on

purpose to give room for placing a supply of provisions under a deficient hive." To supply bees with food, "take an eek of 6 or 8 rows deep, and place it on a stool, with the quantity of honey necessary within it, which may be from one to 4 or even 8lb. of honey, according to the deficiency and number of bees. At night let the deficient hive be gently placed upon the eek, and let the interstices between the hive and the eek be plastered up with lime; after which let the entry be shut. Let the hive and the eek continue in this situation for 24 hours, in which time the bees will have removed all the loose particles of the honey and the smell of it will not be so apt to invite strange bees. The entry at the bottom of the eek may therefore now be opened."

* To EEL, *v. q.* [*ecan, ecan, ean, Sax. eak, Scott. eek, Erse.*] 1. To make bigger by the addition of another piece. 2. To supply any deficiency. See EKE.—

Hence endless penance for our fault I pay;
But that redoubled crime, with vengeance new,
Thou biddest me to eek. *Fairy Queen.*

(1.) * EEL, *n. f.* [*æl, Saxo; aal, German.*] A serpentine slimy fish, that lurks in mud.—

Is the adder better than the eel,
Because his painted skin contents the eye?

Shakespeare.
—The Cockney put the eels i' the pasty alive.
Shakespeare.

(2.) EEL, in ichthyology. See MURÆNA.

(3.) EEL, in geography, a lake of North America. Lon. 98. 50. W. Lat. 49. 0. N.

(4.) EEL FISHING. See BOBBING and SNIGGLING. The silver eel may be caught with several sorts of baits, as powdered beef, garden worms, minnows, hens guts, fish garbage, &c. The most proper time for taking them is in the night, fastening the line to the bank sides, with the laying hook in the water: or a line may be thrown with a great number of hooks, baited and plumbed, with a float to discover where the line lies, that they may be taken up in the morning.

(5.) EELS, MICROSCOPIC. See ANIMALCULE, § 3.—The microscopic eels in VINEGAR are similar to those in rose paste. The taste of vinegar was formerly thought to be occasioned by the biting of these little animals, but that opinion has been long ago exploded. Mentzelius says, he has observed the actual transformation of these little creatures into flies: but as this has never been observed by any other person, nor is there an instance of such a transformation in any other animalcule, it seems probable that Mentzelius has been mistaken in his observations.

EEL SHEAR, a forked instrument with three or four jagged teeth, used for catching of eels: that with the four teeth is best, which they strike into the mud at the bottom of the river, and if it strike against any eels it never fails to bring them up.

EEL-TOWN, or KENAPACAMAQUA, a town of North America, W. of the United States. Lon. 86. 25. W. Lat. 40. 30. N.

EELWYCK, a town of Norway, 20 miles W. of Romsdal.

EEMBURG, or EMBURG, a town of the Batavian republic, in the dept of the Rhine, and on

devant prov. of Utrecht, seated on the Eems, 5 miles NNW. of Amersfort.

(1.) EEMS, a department of the Batavian republic. Leeuwarden is the capital.

(2.) EEMS, a river of the Batavian republic, which gives name to the department.

* E'EN. *adv.* Contracted from *even*. See EVEN.—Says the satyr, if you have a trick of blowing hot and cold out of the same mouth, I have *een* done with you. *L'Estrange*.

EERSEL, a town of the French republic, in the dept. of Dyle, and of devant prov. of Brabant, 6 miles SW. of Eindhoven.

EPESCO, a town of Asiatic Turkey, in the prov. of Natolia, 32 miles SSE. of Smyrna.

* EFF, *n. f.* Commonly written EFF. A small lizzard.

* EFFABLE. *adj.* [*effabilis*, Lat.] Expressive; utterable. *DiD.*

* To EFFACE. *v. a.* [*effacer*, French.] 1. To destroy any form painted, or carved. 2. To make no more legible or visible; to blot out; to strike out.—Characters on dust, the first breath of wind *effaces*. *Locke*.—It was ordered, that his name should be *effaced* out of all publick registers. *Addison on Italy*.—

Time, I said, may happily *efface*
That cruel image of the king's disgrace. *Prior*.

Otway fail'd to polish or refine,
And fluent Shakespear scarce *effac'd* a line.

Pope.

3. To destroy; to wear away.—
Nor our admission shall your realm disgrace,
Nor length of time our gratitude *efface*.

Dryden's An.

EFFARE', or EFFRAYE', in heraldry, a term applied to a beast rearing on its hind legs, as if it were frightened or provoked.

* EFFECT. *n. f.* [*effectus*, Latin.] 1. That which is produced by an operating cause.—You may see by her example, in herself wise, and of others beloved, that neither folly is the cause of vehement love, nor reproach the *effect*. *Sidney*.—*Effect* is the substance produced, or simple idea introduced into any subject, by the exerting of power. *Locke*.—We see the pernicious *effects* of luxury in the ancient Romans, who immediately found themselves poor as soon as this vice got footing among them. *Addison on Italy*. 2. Consequence; event.—No man, in *effect*, doth accompany with others, but he learneth, ere he is aware, some gesture, or voice, or fashion. *Bacon's Natural History*.—To say of a celebrated piece that there are faults in it, is, in *effect*, to say that the author of it is a man. *Addison*. 3. Purpose; intention; general intent.—They spake to her to that *effect*. 4. *Chron.* 4. Consequence intended; success; advantage.—Christ is become of no *effect* unto you. *Gal. v. 4*.—He should depart only with a title, the *effect* whereof he should not be possessed of, before he deserved it. *Clarendon*.—The institution has hitherto proved without *effect*, and has neither extinguished crimes, nor lessened the numbers of criminals. *Temple*. 5. Completion; perfection.—Not so worthily to be brought to heroical *effect* by fortune or necessity, like Ulysses and *Aeneas*, as by one's own choice and working. *Sidney*.—

Semblant art shall carve the fair *effect*.
And full atchievement of thy great designs.

Prior

6. Reality; not mere appearance.—In shew, marvellous indifferently compos'd senate ecclesiastical was to govern, but in *effect* one only must should, as the spirit and soul of the residue, &c. all in all. *Hooker*.—

State and wealth, the business and the crow
Seems at this distance but a darker cloud;
And is to him, who rightly things esteems,
No other in *effect* than what it seems. *Denham*

7. [In the plural.] Goods; moveables.—

What form of prayer

Can serve my turn? Forgive me my foul murther!

That cannot be, since I am still possesst
Of those *effects* for which I did the murther,
My crown, mine own ambition, and my queen.

Shakespeare

—The emperor knew that they could not convey away many of their *effects*. *Addison's Spectator*.

* To EFFECT. *v. a.* [*efficio*, Latin.] 1. To bring to pass; to attempt with success; to achieve; to accomplish as an agent.—

Being consul, I not doubt t'*effect*

All that you wish.

Ben Jonson

2. To produce as a cause.—The change made that syrup into a purple colour, was *effected* by vinegar. *Boyle on Colours*.

* EFFECTIBLE. *adj.* [from *effect*.] Personable; practicable; feasible.—That a pot full of ale will still contain as much water as it was without them, is not *effectible* upon the strict experiment. *Brown's Vulgar Errors*.

* EFFECTIVE. *adj.* [from *effect*.] 1. Having the power to produce effects; efficacious; effectual: with *of*.—They are not *effective* of any thing nor leave no work behind them. *Bacon*.—If a mystery, rite, or sacrament be *effecting* of any spiritual blessings, then this much more, as hath the prerogative and principality above every thing else. *Taylor*.—There is nothing in words and titles but suitableness, that makes them acceptable and *effective*. *Glanville*. 2. Operative; active; increasing the quality of producing effects.—Nor will they speak properly who say that time consumes all things; for time is not *effective*, nor are things destroyed by it. *Brown's Vulgar Errors*. 3. Producing effects; efficient.—Whoever is *effective* real cause of doing his neighbour wrong is criminal, by what instrument soever he does. *Taylor*. 4. Having the power of operation; useful: as, *effective* men in an army.

* EFFECTIVELY. *adv.* [from *effective*.] Powerfully; with real operation.—This *effectively* resists the devil, and suffers us to receive hurt from him. *Taylor's Rule of Living Holy*.

* EFFECTLESS. *adj.* [from *effect*.] Without effect; impotent; useless; unmeaning.—

I'll chop off my hands;

In bootless prayers have they been held up,
And they have serv'd me to *effectless* use.

Shakespeare

* EFFECTOR, *n. f.* [*effector*, Latin.] 1. That produces any effect; performer. 2. Maker, Creator.—We commemorate the creation, at

ps

py worship to that infinite Being who was the
 deity of it. *Derham*.

* **EFFECTUAL**. *adj.* [*effectuel*, French.] 1. Productive of effects; powerful to a degree adequate to the occasion; operative; efficacious.—The reading of the Scripture is *effectual*, as well to lay even the first foundation, as to add degrees of further perfection, in the fear of God. *Hosker*.—The communication of thy faith may become *effectual*, by the acknowledging of every good thing. *Psalms*. 6. 2. Veracious; expressive of truth. A sense not in use.—

Reprove my allegation, if you can;
 Or else conclude my words *effectual*. *Shakespeare*.
 * **EFFECTUALLY**. *adv.* [from *effectual*.] In a manner productive of the consequence intended; efficaciously.—Sometimes the sight of the altar, and decent preparations for devotion, may compose and recover the wandering mind more *effectually* than a sermon. *South*.—A subject of that vastitude, that the strength of one man will scarcely be sufficient *effectually* to carry it on. *Woodward*.

* **EFFECTUATE**. *v. a.* [*effectuer*, Fr.] To bring to pass; to fulfil.—He found means to acquaint himself with a nobleman, to whom discovering what he was, he found him a fit instrument to *effectuate* his desire. *Sidney*.

* **EFFEMINACY**. *n. f.* [from *effeminate*.] 1. Abolition of the qualities of a woman; softness; want of efficacy; mean submission.—

But foul *effeminacy* held me yok'd
 Herond slave! O indignity, O blot
 To honour and religion! *Milton's Agonistes*.
 2. Lasciviousness; loose pleasure.—So long idleness is quite shut out from our lives, all the fine and wantonness, softness, and *effeminacy* are promoted. *Forster*.

(1.) * **EFFEMINATE**. *adj.* [*effeminatus*, Lat.] Having the qualities of a woman; womanish; to an womanly degree; voluptuous; tender; effeminate: of persons.—The king, by his voluptuous life and mean marriage, became *effeminate*, and less sensible of honour. *Bacon*. 2. Resembling the practice of a woman; womanish: of

After the slaughter of so many peers,
 And we at last conclude *effeminate* peace.
Shakespeare.
 From man's *effeminate* slackness it begins,
 Who should better hold his place. *Milton*.
 The more *effeminate* and soft his life,
 The more his fame to struggle to the field. *Dryden*.

Womanlike; soft without reproach. A sense not in use.—

As well we know your tenderness of heart,
 And gentle, kind, *effeminate* remorse. *Shakespeare*.

(2.) **EFFEMINATE**, (*effeminati*), according to the vulgar, are mentioned in several places of Scripture. The word is there used to signify such as were consecrated to some profane god, and dedicated themselves in honour of him. The Hebrew word *kadesh*, translated *effeminatus*, properly signifies consecrated, and hence was attributed to a male of either sex, who publicly prostituted himself in honour of Baal and Ashtaré. *Malachi* expressly forbids these irregularities among

the Israelites; but the history of the Jews shews, that they were notwithstanding frequently practised. *Levit*. xxiii. 18.

(1.) * **To EFFEMINATE**. *v. a.* [*effemino*, Lat.] To make womanish; to weaken; to emasculate; to unman.—When one is sure it will not corrupt or *effeminate* childrens minds, and make them fond of trifles, I think all things should be contrived to their satisfaction. *Locke*.

(2.) **To EFFEMINATE**. *v. n.* To grow womanish; to soften; to melt into weakness.—In a slothful peace both courage will *effeminate* and manners corrupt. *Pope*.

* **EFFEMINATION**. *n. f.* [from *effeminate*.] The state of one grown womanish; the state of one emasculated or unmanned.—Vices the bare figured; not only feneration, or usury, from its fecundity and superfetation, but a degenerate *effemination*. *Brown's Vulgar Errors*.

EFFENDI, in the Turkish language, signifies *master*: and accordingly it is a title very extensively applied; as, to the musti and emirs, to the priests of mosques, to men of learning, and of the law. The grand chancellor of the empire is called *reis effendi*.

EFFERDING, or **EVERDING**, a town of Germany, in the archduchy of Austria, 10 miles W. of Lintz, and 100 W. of Vienna. Lon. 13. 52. E. Ferro. Lat. 48. 18. N.

* **To EFFERVESCE**. *v. n.* [*effervesco*, Latin.] To generate heat by intestine motion.—The compound spirit of nitre, put to oil of cloves, will *effervesce* even to a flame. *Mead on Poisons*.

(1.) * **EFFERVESCENCE**. *n. f.* [from *efferveo*, Latin.] The act of growing hot; production of heat by intestine motion.—In the chymical sense, *effervescence* signifies an intestine motion, produced by mixing two bodies together that lay at rest before; attended sometimes with a hissing noise, frothing, and ebullition. *Arbutnot on Aliment*.—Take chalk, ignite it in a crucible, and then powder it: put it into strong spirit of nitre, 'till it becomes sweetish, and make no *effervescence* upon the injection of the chalk. *Grew*.—Hot springs do not owe their heat to any colluctation or *effervescence* of the minerals in them, but to subterranean heat or fire. *Woodward's Natural History*.

(2.) **EFFERVESCENCES** (§ 1.) are commonly attended with bubbles, vapours, small jets of the liquid, &c. occasioned by the air which then disengages itself. Sometimes also they are accompanied with a great degree of heat, the cause of which is not so well known. Formerly the word **FERMENTATION**, was also applied to *effervescences*; but now that word is confined to the motion naturally excited in animal and vegetable matters, and from which new combinations among their principles take place.

* **EFFETE**. *adj.* [*effetus*, Latin.] 1. Barren; disabled from generation.—It is probable that females have in them the seeds of all the young they will afterwards bring forth, which, all spent and exhausted, the animal becomes barren and *effete*. *Ray*.—In most countries the earth would be so parched and *effete* by the drought, that it would afford but one harvest. *Bentley*. 2. Worn out with age.—All that can be allowed him now, is

to refresh his decrepit *effete* sensuality with the history of his former life. *South.*

* **EFFICACIOUS.** *adj.* [*efficax*, Lat.] Productive of effects; powerful to produce the consequence intended.—

A glowing drop with hollowed steel

He takes, and, by one *efficacious* breath,
Dilates to cube or square. *Philips.*

* **EFFICACIOUSLY.** *adv.* [from *efficacious*.] Effectually; in such a manner as to produce the consequence desired.—If we find that any other body strikes *efficaciously* enough upon it, we cannot doubt but it will move that way which the striking body impels it. *Digby on Bowies.*

* **EFFICACY.** *n. f.* [from *efficax*, Latin.] Power to produce effects; production of the consequence intended.—Whatever is spoken concerning the *efficacy* or necessity of God's word, they tie and restrain only into sermons. *Hooker.*—Whether if they had tasted the tree of life before that of good and evil, they had suffered the curse of mortality; or whether the *efficacy* of the one had not overpowered the penalty of the other, we leave it unto God. *Brown.*—*Efficacy* is a power of speech which represents a thing, by presenting to our minds the lively ideas or forms. *Peachment.*—The apostle tells us of the success and *efficacy* of the Gospel upon the minds of men; and, for this reason, he calls it the power of God unto salvation. *Tillotson.*—The arguments drawn from the goodness of God, having a prevailing *efficacy* to induce men to repent. *Rogers.*

* **EFFICIENCE.** *n. f.* [from *efficio*, Latin.]
* **EFFICIENCY.** *n. f.* The act of producing effects; agency.—The manner of this divine *efficiency* being far above us, we are no more able to conceive by our reason, than creatures unreasonable by their sense are able to apprehend after what manner we dispose and order the course of our affairs. *Hooker.*—That they are carried by the manuduction of a rule, is evident; but what that regulating *efficiency* should be, is not easily determined. *Glanville.*—Sinning against conscience has no special productive *efficiency* of this particular sort of sinning, more than of any other. *South.*—A pious will is the means to enlighten the understanding in the truth of Christianity, upon the account of a natural *efficiency*: a will so disposed will engage the mind in a severe search. *South.*—Gravity does not proceed from the *efficiency* of any contingent and unstable agents; being entirely owing to the direct concurrence of the power of the Author of nature. *Woodward.*

(1.) * **EFFICIENT.** *n. f.* [*efficiens*, Lat.] 1. The cause which makes effects to be what they are.—God, which moveth meer natural agents as an *efficient* only, doth otherwise move intellectual creatures, and especially his holy angels. *Hooker.* 2. He that makes; the effector.—Observations of the order of nature carry the mind up to the admiration of the great *efficient* of the world. *Hale.*

(2.) * **EFFICIENT.** *adj.* Causing effects; that makes the effect to be what it is.—Your answering in the final cause, makes me believe you are at a loss for the *efficient*. *Collier on Thought.*

* **TO EFFIGIATE.** *v. a.* [*effigio*, Latin.] To form in semblance; to image.

* **EFFIGIATION.** *n. f.* [from *effigiate*.] The

act of imagining; or forming the resemblance of things or persons. *Diſt.*

* **EFFIGIES.** *n. f.* [*effigies*, Latin; *effigy*, (1.) * **EFFIGY.** } is from being in *effigy*.] Resemblance; image in painting or sculpture; representation; idea.—We behold the species of eloquence in our minds, the *effigies* or actual images of which we seek in the organs of our hearing. *Dryden's Dufresnoy, Preface.*

Observe those numerous wrongs in *effigy*,
The gods have fav'd from the devouring sea. *Garth.*

(2.) **EFFIGY** is also used for the print or impression of a coin, representing the prince's head who struck it.

(3.) **EFFIGY, TO EXECUTE OR DEGRADE** it denotes the execution or degradation of a condemned criminal, who cannot be apprehended. In France before the revolution, they used to hang a picture on a gibbet, wherein was represented the criminal, with the manner of the punishment at the bottom was written the sentence of condemnation. Those who were sentenced to death were executed in *effigy*.

(2.) **EFFINGHAM**, a county of the United States, in the lower district of Georgia, bounded by the Savannah river on the NE. which separates it from South Carolina, and by Ogeechee river on the SW. which divides it from Liberty county. It contains 2424 inhabitants, including 750 slaves. Chief towns, Ebenezer and Elberton.

(2.) **EFFINGHAM**, a township of New Hampshire, in Stafford county, seated on the Ossipee SE, of Ossipee Pond. It had 154 inhabitants, 1797.

(3.) **EFFINGHAM**, a village of England, in Surrey, between W. Horsley and the Cookhams.

(1.) * **EFFLORESCENCE.** **EFFLORESCENCE** *n. f.* [*effloresco*, Latin.] 1. Production of flowers. Where there is less heat, there the spirit of the plant is digested, and severed from the gross juice in *efflorescence*. *Bacon.* 2. Excrecence, the form of flowers.—Two white sparry incrustations with *efflorescences* in form of shrubs, formed by the trickling of water. *Woodward.* 3. physick.] The breaking out of some humours on the skin, in distempers called exanthematous; in the measles, and the like. *Quincy.*—A wart ginneth in the cutis, and seemeth to be an effluence of the serum of the blood. *Wisem. Surg.*

(2.) **EFFLORESCENCE**, in botany. See **EFFLORESCENTIA**.

(3.) **EFFLORESCENCE**, in chemistry, denotes the formation of a kind of mealy powder on the surface of certain bodies. Efflorescence is occasioned either by decomposition or drying. The efflorescence which happens to cobalt and pyrites is of the first; and that observed on the crystals of marine alkali, Glauber's salt, &c. of the last kind. An efflorescence is sometimes also a species of crystallization, the nature of which is not understood; as, the beautiful vegetations which shoot up from vitriolated tartar acidulated with the vitriolic or nitrous acids, the saline effluvia which are observed to shoot from salt water, &c. Besides the common crystallization, salts, all of them have the property of appearing in the form of an efflorescence, or small saline

calc, when mixed with any thick substance, particularly lime. Whatever salt happens to be made use of, there is little or no difference in the efflorescence. Thus, in butter very much salted, the salt shoots in the form of long spiculae, though the sea salt itself never shoots but in the form of cubical crystals. In like manner, Glauber's salt will appear in the form of an efflorescence, as well as the fossil alkali, &c. nor will the form of the crystals of the efflorescence be perceptibly different from those of sea-salt. The efflorescences which we see very commonly upon walls are in general Glauber's salt. In some cases (but seldom in such efflorescences as we have examined) they are composed of fossil alkali. The reason of these differences is not known. In almost all cases of this kind there seems to be a real growth of salt. On one spot of a plaster wall about two feet square, which we observed particularly, this growth was very evident. The produce was a true Glauber's salt; and by frequently taking off the efflorescence, eight ounces were procured; and the prolific virtue of the wall seem to be in the least impaired by the waste.

(4.) EFFLORESCENCE, in medicine, the same with exanthema. See EXANTHEMA and MEDICINE, Index.

* EFFLORESCENT. *adj.* [*effloresco*, Latin.] Shining out in form of flowers.—Yellow efflorescent quarry incrustations on stone. Woodward.
EFFLORESCENTIA, or rather } in botany,
EFFLORESCENTIAE TEMPUS, } {from *effloresco* to bloom,} the precise time of the year and month in which every plant shows its first flowers. Some plants flower twice a year, as is common between the tropics; others oftener, as the monthlies. The former are called *biferae*; the latter, *moniferae*. The time of flowering is determined by the degree of heat which each species requires. Carrot and snowdrop produce their flowers in January; primrose, in the beginning of March; a greater number of plants, during the month May; corn, and other grain, in the beginning of June; the vine, in the middle of the same month; several compound flowers, in the months July and August; lastly, meadow saffron flowers in October, and announces the speedy approach of winter. Grass of Parnassus always flowers about the time of cutting down the hay; in Sweden, the different species of thistle, lettuce, succory, and balsam, seldom flower till after the summer solstice: the country is, as by a kalendar, that the solstice is when these plants begin to produce their flowers. The temperature of the seasons has a great influence both in accelerating and retarding the flowering of plants. All plants are earlier in warm climates; hence such as are cultivated out of their native soil, never flower till the heat of the season, or situation into which they are removed, is equal to that under the influence of which they flowered in their own country. For this reason, all exotics from warm climates are later in this country than many plants which it naturally produces. In general, the plants of the cold countries, and those produced on the mountains in all climates, being of equal temperature, flower about the same time, viz. during our spring

in Europe. Plants that grow betwixt the tropics, and those of temperate climates, flower during our summer. Plants of temperate climates, situated under the same parallel of latitude with certain parts of Europe, but removed much farther to the west, such as Canada, Virginia, and Mississippi, do not produce flowers till autumn. Plants of temperate climates in the opposite hemisphere to Europe, flower during our winter, which is the summer of these regions. Linnæus and Adanson have given a sketch of the different times in which plants flower at Upsal and Paris.

* EFFLUENCE. *n. f.* [*effluo*, Latin.] That which issues from some other principle.—

Bright effluence of bright essence increate.

Milton.

—These scintillations are not the ascension of the air upon the collision of two hard bodies, but rather the inflammable effluences discharged from the baches collided. Brown.—

From the bright effluence of his deed

They borrow that reflected light,

With which the lasting lamp they feed,

Whose beams dispel the damps of envious night.

Prior.

EFFLUI, a town of Norway, 32 miles N. of Christianfand.

* EFFLUVIA. } *n. f.* [from *effluo*, Latin.]

* EFFLUVIUM. } Those small particles which are continually flying off from bodies; the subtilty of which appears from their being able, a long time together, to produce very sensible effects, without any sensible diminution of the body from whence they arise. Quincy.—If the earth were an electric body, and the air but the effluvia thereof, we might believe that from attraction, and by effluxion, bodies tended to the earth. Brown.—Neither the earth's diurnal revolution upon its axis, nor any magnetick effluvia of the earth, nor the air, or atmosphere which environs the earth, can produce gravity. Woodward.—

If these effluvia, which do upward tend,

Because leis heavy than the air, ascend;

Why do they ever from their height retreat,

And why return to seek their central feat?

Blackmore.

* EFFLUX. *n. f.* [*effluxus*, Latin.] 1. The act of flowing out.—Through the copious efflux of matter through the orifice of a deep ulcer, he was reduced to a skeleton. Harvey. 2. Effusion; flow.—The first efflux of men's piety, after receiving of the selling and consecrating their possessions. Hammond. 3. That which flows from something else; emanation.—

Prime cheerer, light!

Of all material beings, first and best!

Efflux divine! Thomson's Summer.

4. The act of flowing is more properly effluence, and that which flows more properly efflux.

* To EFFLUX. *v. n.* [*effluo*, Latin.] To run out; to flow away. This is not often in use.—Five thousand and some odd centuries of years are effluxed since the creation. Boyle's Seraphick Love.

* EFFLUXION. *n. f.* [*effluxum*, Latin.] 1. The act of flowing out.—By effluxion and attraction bodies tend towards the earth. Brown. 2. That which flows out; effluvia; emanation.—There are some light effluxions from spirit to spi-

rit, when men are one with another ; as from body to body. *Bacon.*

* **To EFFORCE.** *v. a.* [*efforce*, French.] 1. To force ; to break through by violence.—

In all that room was nothing to be seen,
But huge great iron chests and coffers strong,
All barr'd with double bonds, that ne'er
could ween

Them to *efforce* by violence or wrong. *Fairy Q.*
2. To force ; to ravish ; to violate by force.—

Then 'gan her beauty shine as brightest sky,
And burnt her beastly heart t' *efforce* her chastity.

3. To strain ; to exert with effort or vehemence. This word is not now used.—

The palmer lent his ear unto the noise,
To hear who called so importunately ;
Again he heard a more *efford* voice,
That bade him come in haste. *Spenser.*

(1.) **EFFORD**, a village in Cornwall.

(2.) **EFFORD**, NE. of Plymouth, Devonshire.

* **To EFFORM.** *v. a.* [*efformo*, Latin.] To make in any certain manner ; to shape ; to fashion —Merciful and gracious, thou gavest us being, raising us from nothing, and *efforming* us after thy own image. *Taylor.*

* **EFFORMATION.** *n. f.* [from *efform*.] The act of fashioning or giving form to.—Nature begins to set upon her work of *efformation*. *More.*—They pretend to solve phenomena, and to give an account of the production and *efformation* of the universe. *Ray.*

* **EFFORT.** *n. f.* [*effort*, French.] Struggle ; strain ; vehement action ; laborious endeavour.—If, after having gained victories, we had made the same *efforts* as if we had lost them, France could not have withstood us. *Addison on the State of the War.*—

Though the same sun, with all diffusive rays,
Blush in the rose, and in the diamond blaze,
We prize the stronger *effort* of his pow'r,
And always set the gem above the flow'r. *Pope.*

* **EFFOSSION.** *n. f.* [*effossio*, Latin.] The act of digging up from the ground ; deterration.—He set apart annual sums for the recovery of manuscripts, the *effossion* of coins, and the procuring of mummies. *Arbutnot.*

EFFOYES, a town of France, in the department of the Aube, 9 miles E. of Bar-sur-Seine.

* **EFFRAIABLE.** *adj.* [*effroyable*, French.] Dreadful ; frightful ; terrible. A word not used.—Pestilential symptoms declare nothing a proportionate efficient of their *effraiable* nature but arsenical fumes. *Harvey.*

EFFRAYE. See **EFFARE.**

* **EFFRONTERY.** *n. f.* [*effronterie*, French.] Impudence ; shamelessness ; contempt of reproach.—They could hardly contain themselves within one unworthy act, who had *effrontery* enough to commit or countenance it. *King Charles.*—Others with ignorance and insufficiency have self admiration and *effrontery* to set up themselves. *Watts.*—A bold man's *effrontery*, in company with women, must be owing to his low opinion of them, and his high one of himself. *Clarissa.*

EFFRONTES, in church history, a sect of heretics. In 1534, who scraped their forehead with a knife till it bled, and then poured oil into the

wound. This ceremony served them instead baptism. They are likewise said to have denied the divinity of the Holy Spirit.

* **To EFFULGE.** *v. a.* [*effulgeo*, Lat.] To be forth lustre or effulgence. I know not that the word is used.—

The topaz charms the sight,
Like these *effulging* yellow streams of light.

* **EFFULGENCE.** *n. f.* [*effulgeo*, Lat.] Lustre ; brightness ; clarity ; splendour.—

On thee

Impress'd, th' *effulgence* of his glory abides. *M.*
Thy lustre, blest *effulgence*, can dispel
The clouds of error, and the gloom of hell.

* **EFFULGENT.** *adj.* [*effulgens*, Lat.] Shining ; bright ; luminous.—

How soon th' *effulgent* emanations fly
Through the blue gulph of interposing sky.

The downward sun

Looks out *effulgent*, from amid' the flash
Of broken clouds. *Thomson's Spring.*

* **EFFUMABILITY.** *n. f.* [*effumus*, Lat.] The quality of flying away, or vapouring in fire. An useful word, but not adopted.—They seem to define mercury by volatility, or, if I may call such a word, *effumability*. *Boyle.*

* **EFFUSE.** *n. f.* [from the verb.] Waste ; emission. Not used.—

The air hath got into my deadly wounds
And much *effuse* of blood doth make me fail.

* **To EFFUSE.** *v. a.* [*effusus*, Latin.] To pour out ; to spill ; to shed.—

He fell, and, deadly pale,
Groan'd out his soul, with gushing blood effus'd.

At last emerging from his nostrils wide,
And gushing mouth, *effus'd* the briny tide.

(1.) * **EFFUSION.** *n. f.* [*effusio*, Lat.] 1. The act of pouring out.—

My heart hath melted at a lady's tears,
Being an ordinary inundation ;
But this *effusion* of such manly drops,
This show'r, blown up by tempest of the soul,
Startles mine eyes, and makes me more amazed.

—Our blessed Lord commanded the repression of his death, and sacrifice on the cross, to be made by breaking bread and *effusion* of *Taylor's Worthing Communicant.*—If the flood of heaven were any thing distinct from the daily rain, their *effusion*, 'tis likely, was at same time when the abyss was broken. *Burnet's Theory.* 2. Waste ; the act of spilling ; shedding.—When there was but as yet our family in the world, no means of instruction man or divine, could prevent *effusion* of Hooker.—

Stop *effusion* of our Christian blood,
And 'stablish quietness. *Shakespeare's Hamlet.*
Yet shall sue be restor'd, since publick
For private int'rest ought not be withheld
To save th' *effusion* of my people's blood.

3. The act of pouring out words.—Endless and *effusions* of indigested prayers, often times *effuse*, in a most unsufferable manner, the worst part of Christian duty towards God. *Hooker*.
4. Bounteous donation.—Such great force the gospel of Christ had then upon men's souls, melting them into that liberal *effusion* of all that they had. *Hausman on Fundamentals*.
5. The thing poured out.—Purge me with the blood of my Redeemer, and I shall be clean; wash me with that precious *effusion*, and I shall be whiter than snow. *Gay Charles*.

1. EFFUSION, in the ancient heathen sacrifices. See LIBATION.

2. EFFUSION, or FUSION, in astronomy, denotes that part of the sign Aquarius, represented on celestial globes and planispheres, by the water flowing out of the urn of the water-bearer.

3. EFFUSIVE. *adj.* [from *effuse*.] Pouring out; *effusing*.—

The North-east spends its rage; th' *effusive* South

Warms the wide air. *Thomson's Spring*.

ELANI, a town of Asiatic Turkey, in the province of Natolia, 32 miles ESE. of Amasieh.

EPVANLU, a lake of Asiatic Turkey, in the province of Natolia, 36 miles W. of Boli.

ERIM, a town of Egypt, 27 miles ESE. of Alexandria.

(1.) EFT. *adv.* [eft, Saxon.] Soon; quickly; *effusively*; shortly. Obsolete.—

Eft through the thick they heard one rudely

roar,

With noise whereof he from his lofty steed
Down fell to ground, and crept into a bush,
To hide his coward head from dying dread.

Fairy Queen.

Quite consum'd with flame,
The idol is of that eternal maid;

For so at least I have preserv'd the same,
With hands profane, from being eft betray'd.

Fairfax.

(1.) EFT. *n. f.* [efeta, Sax.] A newt; an evet; a small kind of lizard that lives generally in the water.—Peacocks are beneficial to the places

where they are kept, by clearing of them from weeds, adders, and *efts*, upon which they will

feed. *Mortimer's Husband*.—The crocodile of Egypt is the head of Italy, and the *eft* in our country.

(2.) EFT, in zoology. See LACERTA.

EFUSIONS. *adv.* [eft and soon.] Soon after; in a short time; again. An obsolete word; as it seems, by the conjunction of two

words of the same meaning.—He in their stead placed Englishmen, who possessed all their

land. *Spenser's State of Ireland*.—

Effusions the nymphs, which now had flowers their fill,

Was all in haste to see that silver brood. *Spenser*.

The Germans deadly hated the Turks, where-
fore it was to be thought that new wars should *effuse* arise. *Knolles's History*.—

Effusions, O sweetheart kind, my love repay,
And all the year shall then be holiday.

Gay's Pastorals.

1. E. G. [exempli gratia.] For the sake of an instance or example.

Vol. VIII. PART L

EGA, or ÆGA, a town of Portugal, in the province of Beira, 7 miles SSW. of Coimbra.

EGAKTO, one of the smaller Kurile islands, in the N. Pacific ocean. Lon. 172. 10. E. Ferro. Lat. 49. 5. N.

EGALITE, [Fr. i. e. equality,] the surname assumed by Philip Bourbon Capet, the last duke of Orleans, to ingratiate himself with the republicans, upon the abolition of monarchy in France, in Aug. 1792. Neither this piece of policy, however, nor his voting for the death of his unfortunate relation, Lewis XVI. could save him from being denounced as a conspirator against the liberty of the republic, on the 12th April, 1793, and condemned to be guillotined on the 6th Nov. following. He was executed accordingly, at 5 P. M. 3 hours after his condemnation.

EGARTON, a village in Kent.

EGBEL, a town of Hungary, 8 miles W. of Topaltzan.

EGBOROUGH, a village W. of Snath, Yorksh.

EGBUCKLAND, W. of Plympton, Devonsh.

(1.) EGBURY, NW. of Whitechurch, Hampsh.

(2.) EGBURY, near Hartland Point, Devonshire.

EGDEAN, a village in Suffex. Fair Sept. 4.

EGEAN SEA. See ÆGEAN, and ARCHIPELAGO. N° 1.

EGEK, a town of Hungary, 8 miles ESE. of Levens.

EGELN, a town of Germany, in the circle of Lower Saxony and duchy of Magdeburg; 16 miles SW. of Magdeburg.

EGENBURG, or EGENBURG, a town of Germany, in the archduchy of Austria, 12 miles SW. of Znaym, and 36 NW. of Vienna. Lon. 33. 30. E. Ferro. Lat. 48. 37. N.

* EGER *n. f.* [See EAGER.] An impetuous or irregular flood or tide.—From the peculiar disposition of the earth at the bottom, wherein quick excitations are made, may arise those *egers* and flows in some estuaries and rivers; as is observable about Trent and Humber in England. *Brown's Vulgar Errors*.

EGERI, one of the ci-devant grand communities of Switzerland, which, with the town of Zug, formed the Canton of Zug.

EGERIA, or ÆGERIA, a nymph held in great veneration by the Romans. She was courted by Numa Pompilius; and, according to Ovid, became his wife. This prince to give his laws the greater authority, solemnly declared before the Roman people, that they were previously sanctified and approved by the nymph Egeria. Ovid says, that Egeria was to disconsolate at the death of Numa, that she melted into tears, and was changed into a fountain by Diana. She was ranked as a goddess who presided over the pregnancy of women, whence some reckoned her the same with Lucina.

EGERLEY, or EDGLEY, a village in Shropshire, SE. of Mafbrook.

EGERO, a small island near the coast of Norway, in the North sea, 24 miles S. of Stavanger.

(1.) EGERTON, a town near Malpas, Cheshire.

(2.) EGERTON, a village in Kent.

* To EGEST. *v. a.* [egero, Lat.] To throw out food at the natural vents.—Divers creatures sleep all the Winter; as the bear, the hedge-hog, the

bat, and the bee: these all wax fat when they sleep, and *egge* not. *Bacon's Natural History.*

* *EGESTION.* *n. f.* [*egge*, *Sax.* *ouge*, *Erse.*] The act of throwing out the digested food at the natural vents.—The animal soul or spirits manage as well their spontaneous actions as the natural or involuntary exertions of digestion, *eggestion*, and circulation. *Hale's Origin of Mankind.*

(1. f.) * *EGG.* *n. f.* [*egg*, *Sax.* *ouge*, *Erse.*] 1. That which is laid by feathered and some other animals, from which their young is produced.—An egg was found, having lain many years at the bottom of a moat, where the earth had somewhat overgrown it; and this egg was come to the hardness of a stone, and the colours of the white and yolk perfect. *Bacon.*—Eggs are perhaps the highest, most nourishing, and exalted of all animal food, and most indigestible. *Arbutnot.* 2. The spawn or sperm of other creatures.—

Therefore think him as the serpent's egg,
Which, hatch'd, would, as his kind, grow mischievous. *Shakespeare.*

Ev'ry insect of each different kind,

In its own egg, chear'd by the solar rays,

Organs involv'd and latent life displays. *Blackm.*

3. Any thing fashioned in the shape of an egg.—There was taken a great glass-bubble with a long neck, such as chemists are wont to call a philosophical egg. *Boyle.*

(ii.) *EGG*, in physiology, a body formed in certain females, in which is contained an embryo or fetus of the same species, under a cortical surface or shell. The exterior part of an egg is the shell; which in a hen, for instance, is a white, thin, and friable cortex, including all the other parts. The shell becomes more brittle by being exposed to a dry heat. It is lined every where with a very thin but a pretty tough membrane, which dividing at, or very near, the obtuse end of the egg, forms a small bag, where nothing but air is contained. In new-laid eggs this follicle appears very little, but becomes larger when the egg is kept. Within this are contained the *ALBUMEN*, or white, and the *VITELLUS*, or yolk; each of which have their different virtues. The albumen is a cold, viscous, white liquor in the egg, different in consistence in its different parts. It is observed, that there are two distinct albumens, each of which is inclosed in its proper membrane. Of these one is very thin and liquid: the other is more dense and viscous, and of a somewhat whiter colour; but in old and stale eggs, after some days incubation, inclining to a yellow. As this ad albumen covers the yolk on all sides, so it is itself surrounded by the other external liquid. The albumen of a fecundated egg, is as sweet and free from corruption, during all the time of incubation, as it is in new-laid eggs; as is also the vitellus. As the eggs of hens consist of two liquors separated one from another, and distinguished by two branches of umbilical veins, one of which goes to the vitellus, and the other to the albumen; so it is very probable that they are of different natures, and consequently appointed for different purposes. When the vitellus grows warm with incubation, it becomes more humid, and like melting wax or fat; whence it takes up more space. For as the fetus increases, the albumen insensibly wastes away and condenses: the

vitellus, on the contrary, seems to lose little or nothing of its bulk when the fetus is perfect and only appears more liquid and humid while the abdomen of the fetus begins to be formed. The chick in the egg is first nourished by the vitellus; and when this is consumed, by the vitellus, as with milk. If we compare the *CHALAZ* to the extremities of an axis passing through the vitellus, which is of a spherical form, this spot will be composed of two unequal portions, its axis not passing through its centre; consequently, since it is heavier than the white, its smaller portion must always be uppermost in all positions of the egg. The yellowish white round spot, called *CICATRICULA*, is placed on the middle of the smaller portion, and therefore always appears the superior part of the vitellus. Not long before the exclusion of the chick, the whole yolk is taken into its abdomen; and the shell, at the obtuse end of the egg, frequently appears cracked some time before the exclusion of the chick. The chick sometimes observed to perforate the shell with its beak. After exclusion, the yolk is gradually wasted, being conveyed into the small guts by small duct. Eggs differ very much according to the birds that lay them, as to their colour, for bigness, age, and the different way of dressing them: those most used in food are hens eggs; which, such as are new-laid are best. As to the preservation of eggs, it is observed that the egg always quite full when it is first laid by the hen, but from that time it gradually becomes less and less so, to its decay: and however compact a close its shell may appear, it is nevertheless perforated with a multitude of small holes, though too minute for the discernment of our eyes, the effect of which is a daily decrease of matter within the egg, from the time of its being laid; and this perspiration is much quicker in hot weather than in cold. To preserve eggs fresh, there needs more than to preserve them full, and stop transpiration; the method of doing which is, stopping up those pores with matter which is insoluble in watery fluids: and on this principle is, that all kinds of varnish, prepared with spirit of wine, will preserve eggs fresh for a long time if they are carefully rubbed all over the shell: as low, mutton fat, and even fresh butter, are good for this purpose; for such as are rubbed over with any of these will keep as long as those covered over with varnish. M. Reaumur observes, that hens eggs are properly a sort of *CHRYSLIS* the animal; their germ, after they are impregnated by the cock, containing the young animal live, and waiting only a due degree of warmth to be hatched, and appear in its proper form. While eggs have been long kept, there is a road found near one of their ends, between the shell and internal membrane; this is a mark of their being stale, and is the effect of an evaporation of part of their humidity: the varnish which M. Reaumur used to the *chrysalis*, being tried on eggs, was found to preserve them for two years, as fresh if laid but the same day, and such as the nic palate could not distinguish from those that were so. It is not yet known how much farther the useful speculation might be carried, and whether it might not be of great use even to human life, in

is something that should act in the manner of the warmth, by being rubbed over the body, as the ancients did of old, and the savages of the West Indies do at this time, without knowing why.

(iii.) EGG, ARTIFICIAL METHOD OF HATCHING CHICKS FROM. See HATCHING.

(iii.) EGG, in geography, an island of Scotland, one of the Hebrides. It is 10 miles in circumference, is very fertile, and lies 4 miles S. of the Isle of Skye.

(i.) EGG, a town of Norway, 48 miles ENE. of Drontheim.

(i.) EGG, a village in Devonshire.

(i.) EGG HARBOUR, a town in Gloucester county, New Jersey, on Great Egg Harbour, famous for the exportation of pine and cedar.

(i.) EGG HARBOUR, LITTLE, a township of New Jersey, in Burlington county, consisting of 2,000 acres; the most of which being thin and barren, is not under improvement. The compact part of the township is called Clam Town, where there is a meeting house for Quakers, and about fifteen dwelling houses. It has a small trade to the West Indies.

(i.) EGG HARBOUR RIVER, GREAT, a river of New Jersey, which rises between Gloucester and Cumberland counties. After running ESE. a few miles, it becomes the divisional line between Cape May and Gloucester counties, and falls into the bay of its own name. The inlet from the Atlantic ocean lies in $39^{\circ} 22'$. The river abounds with carp, rock-fish, perch, oysters, clams, &c. It has had a ready market at Philadelphia. This river is navigable 20 miles for vessels of 200 tons.

(i.) EGG HARBOUR RIVER, LITTLE, or INLET, a river, lies about 17 miles NE. of Great Egg Harbour Inlet. It receives Mulicuss river, which is in Gloucester and Burlington counties, and is part of the divisional line a few miles from the bay. It is navigable 20 miles for vessels of 60 tons.

(i.) EGG ISLAND, a small island on the NE. of Delaware bay, in Cumberland county.

To EGG. *v. a.* [*eggia*, to incite, Islandick: *egg*, Sax.] To incite; to instigate; to provoke to action: for this, *edge* is, I think, sometimes ignitively used.—Study becomes pleasant to him who is pursuing his genius, and whose ardour of action eggs him forward, and carrieth him through every obstacle. *Derham's Physico-Theology.*

EGGCLIFF, or EGGLESCLIFF, a village in Lancashire, on the Tees, opposite to Yarm.

EGGE, a river of Germany, which runs into the Danube, between Dillingen and Hochstet.

EGGENBERG, a town of Germany, in the Archduchy of Stiria, 3 miles WNW. of Gratz.

EGGENFELDEN, a town of Germany, in the Archduchy of Bavaria, 12 miles SSE. of Dingelshagen.

EGGERDON, a hill in Dorsetshire, near two villages, (N^o 2, 3.) which affords a very fine prospect.

EGGERDON, NORTH, } two villages in Dorsetshire, near Asher.

EGGERDON, SOUTH, }

EGGERON, a town of Egypt, 7 m. S. of Atfieh.

EGGINGTON, a town in Bedfordshire.

EGGINGTON, a village in Derby, near the source of the Dove and the Trent.

(1.) EGGLESTON, NORTH, } two villages in Dorsetshire.

(2.) EGGLESTON, SOUTH, }

EGGLETON, a town in Durham on the Tees.

EGGOATS, a village in Worcesterhire.

EGHAM, a town in the county of Surry, adjoining to which is Runnymede, where the Magna Charta was signed. It is 2 miles W. of Staines, and 18 W. of London.

EGHAM-FOSTERS, 1 mile S. of Egham.

EGILSHA, one of the Orkney-islands, about 6 miles in circumference, a little E. of Ronsa.

EGINA. See ÆGINA.

EGINHART, or ÆGINHARD, secretary to Charles the Great, and the most ancient of the German historians. It is said, that he insinuated himself into the favour of Imma, daughter to Charles the Great, and that Charles, having discovered the intrigue, acted much better than Augustus, who banished Ovid because he was too much favoured by Julia; for he married the two lovers together, and gave them a fine estate in land. See ÆGINHARD.

EGISFORD, a village in Devonshire.

(1.) * EGLANTINE. *n. f.* [*eglantier*, French.] A species of rose sweet-briar —

O'er canopied with luscious woodbine,
With sweet musk roses, and with *eglantine*.

Shakespeare.

The leaf of *eglantine*, not to slander,
Outsweeten'd not thy breath. *Shakespeare.*

Sycamores with *eglantine* were spread,
A hedge about the sides, a covering over head.

Dryden.

(2.) EGLANTINE, in botany. See ROSA, N^o 7.

EGLESTHORN, a town in Yorkshire.

EGLESTON, the name of three villages: viz.

1. in Dorsetshire, near the coast between Weymouth and Pool: 2. in Lancashire, NE. of West Darby: and, 3. in Yorkshire on the Tees, near Barnard Castle.

EGLETHORP, near Grimthorp, Lincolnshire.

EGLETON, in Oakham parish, Rutlandshire.

EGLETONS, a town of France, in the dept. of Correze, 15 miles NE. of Talles.

(1.) EGLINGEN, a lordship of Germany, in the circle of Suabia, joining the county of Oettingen and duchy of Neuburg.

(2.) EGLINGEN, a town in the above lordship, purchased by the Prince of Tour-Taxis, for 200,000 florins. It is 6 miles N. of Dillingen, and 6 S. of Norlingen.

EGLINHAM, a town in Northumberland.

EGLISE NEUVE, [*i. e.* the New Church,] a town of France, in the department of Puy de Dome, 3 miles S. of Besse.

EGLISLI, two villages of Ireland: 1. in King's County, 60 miles from Dublin: 2. in Tyrone, 76 miles from Dublin.

EGLISOW, an ancient town of the Helvetic Republic, in the ci-devant canton of Zurich, seated on the Rhine, and the Thur, 15 miles N. of Zurich. Lon. 8. 30. E. Lat. 47. 33. N.

EGLOFF, or MEGLOFF, a lordship and principality of Germany, in the circle of Suabia, 4 miles W. of Ilni.

EGLON, a king of the Mosabites, who oppressed the Israelites for 18 years. See Judges iii. 12—14.

Calmet confounds this servitude of the Hebrews

with that under Chusan-rushathaim, making it to subsist only 8 years, from A. M. 2591 to 2599; whereas this servitude under Eglon lasted 18 years, and commenced A. M. 2661, and 62 years after they had been delivered by Othniel, from their subjection to Chushan-rishathaim.

EGLOKROUSE, a village in Cornwall.

EGLOSHALE, 2 m. from Padstow, Cornwall.

EGLOSKERRY, or EGLESK, a village in Cornwall, near Launceston.

EGLWISGACH, a town in Denbighshire.

EGLWISWREW, a village of Wales, in Pembrokeshire. It has two annual fairs.

EGMANTON, S. of Tuxford, Nottinghamsh.

EGMER, NW. of Walsingham, Norfolk.

(1.) EGMONT, a town of the Batavian republic, in the dept. of the Texel, and ci-devant province of North Holland, 3 miles S. of Alcmær.

(2.) EGMONT, a village of Ireland, in Cork, Munster; 6 miles from Cork.

(3.) EGMONT BAY, a bay on the SW. of the island of St John, in the gulf of St Lawrence. Lon. 64. o. W. Lat. 46. 30. N.

(4.) EGMONT ISLAND, in the S. Pacific ocean, is 6 miles long, and 4 broad. The land is low and full of trees. Lon. 138. 30. W. Lat. 19. 20. N.

EGNBERG, a town of Germany, in the archduchy of Austria, 8 miles NE. of Gmunden.

EGOCSHAC, a small Russian settlement on the coast of the island of Oonalashka. See COOK, N° III. § 10.

EGORBEUSK, a town of Russia, in the government of Riazan; 28 miles N. of Riazan.

EGOREUSKOI, a town of Russia, 40 miles NE. of Kologrin.

* EGOTISM. *n. f.* [from *ego*, Lat.] The fault committed in writing by the frequent repetition of the word *ego* or *I*; too frequent mention of a man's self in writing or conversation.—The most violent *egotism* which I have met with, in the course of my reading, is that of Cardinal Woolsey; *ego & rex meus*, I and my king. *Spektator*.

* EGOTIST. *n. f.* [from *ego*.] One that is always repeating the word *ego*, *I*; a talker of himself.—A tribe of *egotists*, for whom I have always had a mortal aversion, are the authors of memoirs, who are never mentioned in any works but their own. *Spektator*.

* To EGOTIZE. *v. n.* [from *ego*.] To talk much of one's self.

(1.) EGRA, a river of Bohemia.

(2.) EGRA, a town of Bohemia, seated on the river (N° 1.) formerly imperial, but now subject to the house of Austria. It contains a great number of able artificers, and is famous for its mineral waters. General Wallenstein was assassinated here in 1634. The French became masters of this town in 1741; but afterwards being blocked up, they were forced to capitulate Sept. 7th, 1743. It is considered as a town of the greatest consequence in Bohemia, except Prague. It lies 17 miles SW. of Elbogen, and 76 W. of Prague. Lon. 12. 40. E. Lat. 50. 9. N.

* EGREGIOUS. *adj.* [*egregius*, Lat.] 1. Eminent; remarkable; extraordinary.—He might be able to adorn this present age, and furnish history with the records of *egregious* exploits, both of art and valour. *Moore against Atheism*.—

One to empire born;

Egregious prince; whose manly childhood shew'd His mingled parents, and portended joy Unspeakable. *Philips*.

—An *egregious* and pregnant instance how far virtue surpasses ingenuity. *Woodward*. 2. Eminently bad; remarkably vicious. This is the usual sense.—We may be bold to conclude, that these last times, for insolence, pride, and *egregious* contempt of all good order, are the worst. *Hooker, Preface*.

Ah me, most credulous fool!

Egregious murder! *Shakespeare's Cymbeline*. And henceforth *egregious* wizzard shall foredoom The fate of Louis, and the fall of Rome. *Pope*.

* EGREGIOUSLY. *adv.* [from *egregious*.] Eminently; shamefully.—

Make the Moor thank me, love me, and reward me,

For making him *egregiously* an ass, And practising upon his peace and quiet, Even to madness. *Shakespeare's Othello*.

—He discovered that, besides the extravagance of every article, he had been *egregiously* cheated. *Arbutnot's John Bull*.

(1.) EGREMONT, a town of England, in the county of Cumberland, situated on a small river near the Irish sea. A weekly market is held on Saturday. It was formerly a borough, sending one member to parliament in the reign of Edward I. Near it are the remains of an ancient castle. It is 9 miles SSE. of Whitehaven, and 299 N. of London. Lon. 3. 35. W. Lat. 54. 32. N.

(2.) EGREMONT, a townsh. of the United States, in Berkshire county, Massachusetts, containing 759 inhabitants; incorporated in 1760. It is 15 miles SW. of Stockbridge, and 145 W. of Boston.

* EGRESS. *n. f.* [*egressus*, Lat.] The power or act of going out of any place; departure.—

Gates of burning adamant,

Barr'd over us, prohibit all *egress*. *Milton*.

—This water would have been locked up within the earth, and its *egress* utterly debarr'd, had the strata of stone and marble remained continuous. *Woodward's Nat. History*.

* EGRESSION. *n. f.* [*egressio*, Lat.] The act of going out.—The vast number of troops is expressed in the swarms; their tumultuous manner of issuing out of their ships, and the perpetual *egression*, which seemed without end, are imaged in the bees pouring out. *Pope*.

(1.) * EGRET. *n. f.* A fowl of the heron kind, with red legs. *Bailey*.

(2.) EGRET. See ARDEA, N° 4.

EGREVILLE, a town of France, in the dept. of Seine and Marne; 9 miles SE. of Nemours.

* EGRIOT. *n. f.* [*aigret*, French; perhaps from *aigre*, sour.] A species of cherry.—The cœur-cherry, which inclineth more to white, is sweeter than the red; but the *egriot* is more four. *Bacon*.

EGRISELIES, a town of France, in the department of Yonne, and ci-devant province of Burgundy, 7 miles S. of Sens.

(1.) EGTON, a town of England in Lancashire.

(2.) EGTON, a village in the N. Riding of Yorkshire. It has fairs in Feb. May, Sept. & Nov.

EGUILLES, a town of France, in the dept. of the Mouths of the Rhone; 6 miles NW. of Aix.

EGUIMUHA,

EGGIMUHA, or ELGIMUHA, a town of Africa, in the empire of Morocco, at the foot of Mount Atlas, near which is an iron mine.

EGUISHEM, a town of France, in the department of the Upper Rhine, and ci-devant province of Upper Alsace; 3 miles SW of Colmar.

EGUERENDE, a town of France, in the department of Correze; 12 miles NE. of Uffel.

EGUZON, a town of France in the department of the Indre; 9 miles S. of Argenton.

(1.) EGYPT, an extensive country of Africa, lying between 30° and 36° of lon. E. and between 22° and 31° of lat. N. It is bounded by the Mediterranean on the N., by the Red-sea and Isthmus of Suez, which divide it from Arabia, on the E.; by Abyssinia or Ethiopia, on the S.; and by the deserts of Barca and Nubia, on the W.; being 1000 miles in length from N. to S. and from 100 to 150 in breadth from E. to W.

(2.) EGYPT, ANCIENT DIVISION OF. Ancient Egypt is by some divided into two parts, the Upper and Lower Egypt: by others into three, the Upper Egypt, properly so called, or THEBAIS; the Middle Egypt, or HEPTANOMIS; and the Lower Egypt, the best part of which was the Delta, or that space encompassed by the branches of the Nile. See THEBAIS, &c.

(3.) EGYPT, ANCIENT NAMES AND ETYMOLOGY. Egypt may with justice lay claim to as high antiquity as any nation in the world. The country was most probably peopled by Mizraim the son of Ham and grandson of Noah. By its ancient inhabitants it was called *Chemia*, and is still called *Chem* in the language of the Copts or native Egyptians. This name it is supposed to have received from Ham the son of Noah. In scripture we find it most generally named *Mizraim*; though in the Psalms it is styled the *land of Ham*. To us it is best known by the name of Egypt, the etymology of which is more uncertain. Some derive it from *Egyptus*, a supposed king of the country: others say it signifies no more than the *land of the Copts*; "Aia in Greek signifying *country*, and *Λαίωτες*, *Aioptotes*, being easily hardened into *Egyptus*. The most probable opinion, however, seems to be, that it received this name from the blackness of its soil, and the dark colour of its river and inhabitants: for such a black colour is by the Greeks called *egyptios* from *Εγυπτιος*, a vulture; and by the Latins, *subafricanus*. For the same reason, other names of foreign import have been given to this country by the Greeks; such as *Aeria*, and *Melambolus*: the river itself was called *Melo* or *Melas*; by the Persians, *Sisibor*; and by the Ethiopians, *Siris*; all of which signify *black*.

(4.) EGYPT, CLIMATE OF. The air and climate of Egypt are extremely hot, not only from the height of the sun, which in summer approaches to the zenith, but from the want of rain, and from the vicinity of those burning and sandy deserts which lie to the S. In July and August, according to M. Volney, Reaumur's thermometer stands, even in the most temperate apartments, at 104° or 25° above the freezing point; and in the southern parts it is said to rise still higher. Hence, he says, only two seasons should be distinguished in Egypt, the cool and the hot, or

spring and summer. The latter continues for the greatest part of the year, viz. from March to November or even longer; for by the end of February the sun is intolerable to an European at 9 o'clock in the morning. During the whole of this season, the air seems to be inflamed, the sky sparkles, and every one sweats profusely, even without the least exercise, and when covered with the lightest dress. This heat is tempered by the inundation of the Nile, the fall of the night dews, and the subseque evaporation; so that some of the European merchants, as well as the natives, complain of the cold in winter. The dew does not fall regularly throughout the summer, as with us; the parched state of the country not affording a sufficient quantity of vapour for this purpose. It is first observed about St John's day (June 24th), when the river has begun to swell, and consequently a great quantity of water is raised from it by the heat of the sun, which being soon condensed by the cold of the night air, falls down in copious dews. It might be imagined, that as, for three months of the year, Egypt is in a wet and marshy situation, the excessive evaporation and putrefaction of the stagnating waters would render it very unhealthy. But this is by no means the case. The great dryness of the air makes it absorb vapours of all kinds with the utmost avidity; and these rising to a great height, are carried off by the winds either to the S. or N. without communicating any of their pernicious effects. This dryness is so remarkable in the internal parts of the country, that flesh meat exposed to the open air does not putrefy even in summer, but soon becomes hard and dry like wood. In the deserts there are frequently dead carcases thus dried in such a manner, and become so light, that one may easily lift that of a camel with one hand. In the maritime parts, however, this dryness of the air is not to be expected. They discover the same degree of moisture which usually attends such situations. At Rosetta and Alexandria, iron cannot be exposed to the air 24 hours without rusting. According to M. Volney, the air of Egypt is also strongly impregnated with salts; for which opinion he gives the following reason: "The stones are corroded by natrum (mineral alkali), and in moist places long crystallizations of it are to be found, which might be taken for salt-petre. The wall of the Jesuits garden at Cairo, built with earth and bricks, is every where covered with a crust of this natrum as thick as a crown piece: and when this garden has been overflowed by the waters of the kalidj (canal), the ground, after they have drained off, appears sparkling on every side with crystals, which certainly were not brought thither by the water, as it shews no sign of salt either to the taste or by distillation."—But whatever may be the quantity of salt contained in the earth, it is certain that M. Volney's opinion of its coming thither from the air cannot be just. The salt in question is excessively fixed, and cannot be dissipated into the air without the violent heat of a glass-house furnace; and even after this has been done, it will not remain diffused through the atmosphere, but quickly falls back again. No experiments have ever shown, that any salt was or could be diffused in the air, except vo-

lible alkali, and this is now known to be formed by the union of two permanently elastic fluids; and it is certain that a saline air would quickly prove fatal to the animals who breathed it. The abundance of this kind of salt in Egypt therefore only shows, that by some unknown operation the heat of the sun forms it from the two ingredients of earth and water, though we do not yet understand the manner, nor are able to imitate this natural operation. To this saline property of the earth M. Volney ascribes the excessive quickness of vegetation in Egypt, which is so great, that a species of gourd called *kara will*, in 24 hours, send forth shoots of four inches in length; but for the same reason, in all probability, it is that no exotic plant will thrive in Egypt. The merchants are obliged annually to send to Malta for their garden seeds; for though the plants thrive very well at first, yet if the seed of them is preserved and sown, they always come up too tall and slender. By reason of the great dryness of the air, Egypt is exempted from the phenomena of rain, hail, snow, thunder and lightning. Earthquakes are also seldom heard of in this country; though sometimes they have been very fatal and destructive, particularly one in 1112. In the Delta, it never rains in summer, and very seldom at any other time. In 1761, however, such a quantity of rain unexpectedly fell, that a great number of houses, built with mud-walls, tumbled entirely down by being soaked with the water, to which they were unaccustomed. In the Higher Egypt the rain is still less frequent; but the people, sensible of the advantages which accrue from it, always rejoice when any falls, however insufficient to answer the purpose. This deficiency of rain is supplied by the inundation and dew. The latter proceed, partly from the waters of the inundation and partly from the sea. At Alexandria, after sun-set, in April, the clothes exposed to the air on the terraces are soaked with them as if it had rained. These dews are more or less copious according to the direction of the wind. They are produced in the greatest quantity by the W. and N.W. which blow from the sea; but the S. and S.E. winds, blowing over the deserts of Africa and Arabia, produce none. See § 36, 37.

(5.) EGYPT, DISEASES OF. Though the climate of Egypt is far from being unhealthy; yet there are not a few diseases which seem to be peculiar to it, and to have their origin either from the constitution of the atmosphere, or the manner of living. One of these till lately has been supposed to be the plague; which opinion was supported by Dr Mead, who endeavoured to assign a natural reason why it should take its origin in this country. But it is now universally agreed, that the plague never originates in the interior parts of Egypt, but always begins at Alexandria, passing successively from thence to Rosetta, Cairo, Damietta, and the rest of the Delta. It is likewise observed, that its appearance is always preceded by the arrival of some vessel from Smyrna or Constantinople; and that, if the plague has been very violent in either of these cities, the danger to Egypt is the greater. On proper inquiry, it is found to be really a native of Constantinople; from whence it is exported by the absurd negli-

gence of the Turks, who refuse to take any care to prevent the spreading of the infection. As it sell even the clothes of the dead without the ceremony, and ships laden with this pernicious commodity are sent to Alexandria, it is no wonder that it should soon make its appearance there. As soon as it has reached Cairo, the European merchants shut themselves up with their families in their *khans* or lodgings, taking care to have further communication with the city. Their provisions are now deposited at the gate of the *khans* and are taken up by the porter with iron tools who plunges them into a barrel of water provided for the purpose. If they have occasion to speak to any person, they take care to keep at some distance as to avoid touching or even breathing upon each other. By these precautions they certainly escape the general calamity, except by accident; and it not long ago happened that the case was conveyed by a cat into the dwelling of the French merchants in Cairo; by which they were infected, and one died. In this manner were imprisoned for 3 or 4 months, without other amusement than walking on their terrace in the evenings, cards, or conversation with one another. There is a remarkable difference betwixt the plague at Constantinople and Egypt. In the former, it is most violent in summer; and in the latter in winter, ending always in June. It is also remarkable, that the water carriers of Egypt, whose backs are constantly wet from the nature of their occupation, never have the plague. It appears in Egypt every 4th or 5th year, when it makes such ravages as would depopulate the country, were it not the vast concourse of strangers which arrives every year from all parts of the Turkish empire. A malady which seems in reality to be peculiar to Egypt is blindness. This is so common at Cairo that M. Volney informs us, out of 100 persons whom he met on the street, he might reckon quite blind; 10 without the sight of one eye; and others with their eyes red, purulent, or blinded. Almost every one, says he, wears a fillet, a token of an approaching or convalescent ophthalmia, considering the causes of this disorder, he reckons the sleeping upon terraces to be a principal cause. The south wind, he says, cannot be the cause, otherwise the Bedouins would be equally subject to it with the Egyptians themselves; but with the greatest probability to be assigned as a cause, is the very poor and little nutritive food which the natives are obliged to use. "The chief food, milk, honey, confection of grapes, figs, fruits, and raw vegetables (says he), which are ordinary food of the people, produce in the stomach a disorder which physicians have observed to be the sight; the raw onions, especially, which they devour in great quantities, have a peculiar heat quality, as the monks of Syria made me remark myself. Bodies thus nourished, abound in corrupted humours, which are constantly endeavouring to discharge. Diverted from the ordinary channel by habitual perspiration, these humours fly to exterior parts, and fix themselves where they find the least resistance. They therefore naturally attack the head, because the Egyptians, by shaving it once a-week, and covering it with a prodigious

hot head-dress, principally attract to it the perspiration; and if the head receive ever so slight an impression of cold on being uncovered, this perspiration is suppressed, and falls into the teeth, or falls more readily on the eyes as being the tenderest parts. It will appear the more probable that the excessive perspiration of the head is a principal cause, when we reflect that the ancient Egyptians, who went bare-headed, are not mentioned by physicians as being so much afflicted with ophthalmies; though we are informed by historians that some of the Pharaohs died blind. The Arabs of the desert also, who cover the head but not the face, especially when young, are also very little subject to them." In this country blindness is the consequence of the small-pox, a disorder frequent and very fatal among the Egyptians. They are not unacquainted with inoculation, but they seldom practise it. To the same cause, viz. unwholesome food, M. Volney ascribes the general deformity of the beggars, and miserable appearance of their children; which he says, are nowhere so wretched. " Their hollow eyes, pale, and puffed faces, swollen bellies, meagre extremities, and yellow skins, make them always seem as if they had not long to live. Their ignorant women pretend that this is the effect of the evil influence of some envious person, who has bewitched them; and this ancient prejudice is still general in Turkey; but the real cause is the badness of their food. In spite of the talismans, therefore, an incalculable number of them perish; nor is any thing more fatal to the population of the neighbouring country than Grand Cairo." The venereal disease, which for reasons best known to themselves, the inhabitants call the *blest evil*, is so general at Cairo, that one half of the inhabitants are affected. It is extremely difficult to cure, tho' the symptoms are comparatively very mild, inasmuch as people who are infected with it will frequently live to the age of 80; but it is fatal to children from the infection, and exceedingly dangerous to such as emigrate to a colder climate. Besides these, there are two uncommon diseases met with in Egypt, viz. a cutaneous eruption which returns annually; and a swelling of the testicles, which often degenerates into an enormous hydatid. The former comes on towards the end of the year beginning of July, making its appearance in spots and pimples all over the body, occasioning a very troublesome itching. The cause of this distemper, M. Volney says, is the corruption of the water of the Nile, which, towards the end of April becomes very putrid. After this has been drunk for some time, the waters of the inundation, which are fresh and wholesome, tend to produce some change in the blood and humours; whence a cutaneous eruption is the consequence. The hydrocele is most commonly attached to the Jews and Copts; and is attributed to the quantity of oil they use, as well as to their frequent bathing. Our author remarks, that " in Syria, as well as in Egypt, constant experience has shown, that brandy distilled from common figs, when the fruit of the sycamore tree, as well as when the dates and the fruit of the nopal, has a more immediate effect on the testicles, which it renders hard and painful the 3d or 4th day after it

has been drunk; and if the use of it be not discontinued, the disorder degenerates into a confirmed hydrocele. Brandy distilled from dried raisins has not the same effect: this is always mixed with aniseeds; and is very strong, being distilled three times. The Christians of Syria and the Copts of Egypt make great use of it; the latter especially drink whole bottles of it at their suppers. I imagined this an exaggeration; but I have myself had ocular proofs of its truth, though nothing could equal my astonishment that such excesses do not produce instant death, or at least every symptom of the most insensible drunkenness." In spring malignant fevers prevail in this country; concerning which, M. Volney mentions no remarkable particular, but that eggs are a kind of poison, and that bleeding is very prejudicial. He recommends a vegetable diet, and the bark in very large quantity.

(6.) EGYPT, GENERAL APPEARANCE OF. According to M. Volney, who gives a very particular description of the face of the country, the entrance into Egypt at Rosetta presents a most delightful prospect, by the perpetual verdure of the palm trees on each side, the orchards watered by the river, with orange, lemon, and other fruit trees, which grow there in vast abundance; and the same beautiful appearance is continued all the way to Cairo. As we proceed farther up the river, he says, that nothing can more resemble the appearance of the country than the marshes of the lower Loire, or the plains of Flanders; instead, however, of the numerous trees and country houses of the latter, we must imagine some thin woods of palms and sycamores, with a few villages of mud-walled cottages, built on artificial mounds. All this part of Egypt is very low and flat, the declivity of the river being so gentle, that its waters do not flow at a greater rate than one league in an hour. Throughout the country nothing is to be seen but palm trees, single or in clumps, which become more rare as you advance; with wretched villages composed of huts with mud walls, and a boundless plain, which at different seasons is an ocean of fresh water, a miry morass, a verdant field, or a dusty desert; and on every side an extensive and foggy horizon, where the eye is wearied and disgusted. At length towards the junction of the two branches of the river, the mountains of Cairo are discovered on the E.; and to the SW. 3 detached masses appear, which from their triangular form are known to be the PYRAMIDS. We now enter a valley which turns to the S. between two chains of parallel eminences. That to the E. which extends to the Red Sea, merits the name of a mountain from its steepness and height, as well as that of a desert from its naked and savage appearance. Its name in the Arabic language is *MOKATTAM*, or the *beaten mountain*. The western is nothing but a ridge of rocks covered with sand, which has been very properly termed a *natural mound* or *causeway*. In short, that the reader may at once form an idea of this country, let him imagine on one side a narrow sea and rocks; on the other, immense plains of sand; and in the middle, a river, flowing through a valley of 150 leagues in length, and from 3 to 7 wide, which at the distance of 30 leagues from the sea separates into two arms; the branches of which wander

wander over a soil almost free from obstacles, and void of declivity.

(7.) EGYPT, GENERAL MODERN DIVISION OF. This country is still divided into two principal parts, called the *Higher*, or *Upper*, and *Lower Egypt*. It is subdivided into 80 provinces.

i. EGYPT, HIGHER, or UPPER, says M. Savary, is only a long narrow valley beginning at Sienna and terminating at Cairo. It is bounded by two chains of mountains running from N. to S. and taking their rise from the last cataract of the Nile. On reaching the latitude of Cairo they separate to the right and left; the one taking the direction of mount Colzoum, the other terminating in some sand banks near Alexandria; the former being composed of high and steep rocks, the latter of sandy hillocks over a bed of calcareous stone. Beyond these mountains are deserts bounded by the Red Sea on the east, and on the west by other parts of Africa; having in the middle that long plain which, even where widest, is not more than 9 leagues over. Here the Nile is confined in its course betwixt these insuperable barriers, and during the time of its inundation overflows the country all the way to the foot of the mountains; and Mr Bruce observes, that there is a gradual slope from the bed of the river to those mountains on both sides. The baron de Tott says, that the mountains 4 leagues from the Nile, and facing Cairo, "are only a ridge of rocks above 40 or 50 feet high, which divide Egypt from the plains of Libya; which ridge accompanies the course of the river, at a greater or lesser distance, and seems as if only intended to serve as a bank to the general inundation."

ii. EGYPT, LOWER, according to M. Savary, comprehends all the country between Cairo, the Mediterranean, the Isthmus of Suez, and Libya. "This immense plain (says he) presents on the borders of its parching sands a stripe of lands, cultivated along the canals of the river, and in the middle a triangular island to which the Greeks gave the name of DELTA; at the top of the angle of which, the Baron de Tott informs us, the rocks of Libya and the coasts of Arabia open and recede from each other, towards the E. and W. parallel to the Mediterranean. This great extent of country, from Barca to Gaza, is either overflowed by the river, or capable of being so; which thus fertilizes in a high degree a tract of country, seemingly devoted to perpetual barrenness, on account of the want of rain and the heat of the climate. According to the testimonies of both Mr Bruce and M. Volney, the coast of Egypt is so extremely low, that it cannot be discovered at sea till the mariners come within a few leagues of it. In ancient times the sailors pretended to know when they approached this country, by a kind of black mud brought up by their sounding lines from the bottom of the sea; but this notion, though as old as the days of Herodotus, has been discovered to be a mistake by Mr Bruce; who found the mud to arise while the vessel was opposite to the deserts of Barca. All along the coast of Egypt a strong current sets to the eastward.

(8.) EGYPT, HISTORY OF, FROM MENES TO THE DEATH OF SESOSTRIS. The Egyptians, like the Chinese, pretend to an excessive antiquity, pretending to have records for 10, 20, or even 50,000

years. Thus their history is so much involved in obscurity and fable, that for many ages it must be passed over in silence.—The first mortal to whom the Egyptians own to have reigned in the country, was MENES or Menas; whom the chronologers reckon the same with MIZRAIM, the grandson of Noah. He had been preceded, however, by a set of *immortals*, (a fable probably founded upon the long lives of the Ante-diluvians) who, notwithstanding their immortality, had left him the kingdom in a very bad situation: for the whole country, except Thebais, was a more or less desolate waste, and the people also were entirely destitute of religion and every kind of knowledge which could render life comfortable. Menes diverted the course of the Nile, which before that time had washed the foot of a sandy mountain near the borders of Libya, built the city of Memphis, instructed his subjects, and did other things of a similar kind which are usually attributed to the founders of kingdoms. From the time of Menes, the Egyptian chronology is filled with a list of 330 kings who reigned 1400 years, but did nothing worthy of notice.—The first distinct piece of history found concerning Egypt, is the irruption of the *Shepherds*, by whom the country was subdued, but at what period this revolution happened cannot be known. The affair is thus related by Herodotus. In the reign of Timaüs king of Egypt, a multitude of men, ignoble in their race, poured from the east into Egypt, made war with the inhabitants; who submitted to them without resistance. The shepherds, however, behaved with the greatest cruelty; burnt the cities, threw down the temples, and put to death the male inhabitants, carrying the women and children into captivity. This people came from Arabia, and were called Hyescos, or *king-shepherds*. They held Egypt in subjection for 259 years; at the end of which period, they were obliged, by a king of Upper Egypt, named Amosis or Thebmosis, to leave the country. This prince's father had secured great advantages over them, and shut them in a place called Abaris, or Avaris, containing 10,000 acres of land. Here they were closely besieged by Amosis, with an army of 400,000 men, till at last an agreement was made, in consequence of which the shepherds withdrew from Egypt with their families, to the number of 240,000; taking the way of the desert, entered Syria; fearing the Assyrians, who were then very powerful, and masters of Asia, they entered the land of Canaan, and built there the city of Jerusalem. According to Mr Bruce, the shepherds who invaded Egypt were no other than the inhabitants of Barabra. They were, he says, *carriers* to the Cushites who lived farther to the S. The latter had built the many stately temples in Thebes and other cities of Egypt; though, according to him, they had no dwelling-places but holes or caves in the rocks. Being a commercial people, they remained at home collecting and preparing their wares, which were dispersed by the *barabers* or shepherds above mentioned. These, from the nature of their employment, lived in moveable habitations, as the Tartars do at this day. By the Hebrews, he tells us they were called *phut*, by the *shepherds* by every other people; and from the

word *Barabra* is derived. By their employment, which was the dispersing the Indian and African goods all over the continent, they had become a great and powerful people; and from their opposite dispositions and manners, were often enemies to the Egyptians. To one opinion our author ascribes the destruction of Thebes in Upper Egypt, so much celebrated by Homer for its magnificence. But this certainly cannot be the case; for Homer wrote long after the time of Joseph: and we find that even then the Egyptians held the shepherds in abhorrence, in all probability because they had been grievously oppressed by them. Mr Bruce reckons three invasions of these people; viz. 1st, that of Salatis already mentioned, who overthrew the first dynasty of Egyptian kings from Menes, and destroyed Thebes; 2d, that of Sabacco or So; for according to him this was not the name of a single prince, but of a people, and signifies *shepherds*; and 3d, the building of Memphis, where 240,000 of them were besieged as above mentioned. But these accounts are inconsistent; for how is it possible that the *third* invasion, antecedent to the taking of Jerusalem, could be posterior to the time, if the latter happened only in the days of Sennacherib? In these early ages, however, it appears that the kingdom of Egypt had been very extended, and its dominion very widely extended; and that the *Badrians* revolted from Osiris, another Egyptian king of very high antiquity, and of whose wealth the most remarkable accounts are given. After an unknown interval of time from this monarch, reigned Sesosis. He was the first great warrior whose exploits are recorded with any degree of distinctness. In what age of the world he lived, is uncertain. Some chronologers, among whom is Sir Isaac Newton, are of opinion, that he is the same, or *Shishak*, who took Jerusalem in the time of Rehoboam. Others place him much later; and Mr Whiston will have him to be a Pharaoh who refused to part with the Israelites, and was at last drowned in the Red Sea. Many endeavours to prove that no such person ever existed; but that in his history, as well as that of many ancient heroes, we have an account of that of the Cushites, or Babylonians, who spread themselves over great part of the known world, and every where brought the people into subjection to them. His reign is reckoned to be an extraordinary part of the Egyptian history, and the following seems to be the least false account that can be got of it. The father of Sesosis was told in a dream, by the god Vulcan, that his son, then newly born, should be lord of the whole earth. His father, upon the receipt of this vision, got together all the males in the land of Egypt that were born on the same day as his son; appointed nurses and proper persons to take care of them, and had them treated as his own child; being persuaded that they had been the constant companions of his father, would prove his most faithful ministers and officers. As they grew up, they were inured to various exercises; and, in particular, were permitted to taste any food till they had performed a course of 180 furlongs, upwards of

22 of our miles. When the old king imagined they were sufficiently educated in the martial way, he designed them to follow, they were sent by way of trial of their abilities against the Arabians. In this expedition Sesosis proved successful, and in the end subdued that people who had never before been conquered. He was then sent to the westward, and conquered the greatest part of Africa; nor could he be stopped in his career till he arrived at the Atlantic ocean. Whilst he was on this expedition, his father died; and then Sesosis resolved to fulfil the prediction of Vulcan, by actually conquering the whole world. As he knew that this must take up a long time, he prepared for his journey in the best manner possible. The kingdom he divided into 36 provinces, and endeavoured to secure the affections of his people by gifts both of money and land. He forgave all who had been guilty of offences, and discharged the debts of all his soldiers. He then constituted his brother Armais the supreme regent; but forbade him to use the diadem, and commanded him to offer no injury to the queen or her children, and to abstain from the royal concubines. His army consisted of 670,000 foot, 24,000 horse, and 27,000 chariots. Besides these land forces, he had at sea two mighty fleets; one, according to Diodorus, of 400 sail. Of these fleets, one was designed to make conquests in the west, and the other in the east, and therefore the one was built on the Mediterranean, and the other on the Red Sea. The first of these conquered Cyprus; the coast of Phœnicia, and several of the *Cyclades*; the other conquered all the coasts of the Red Sea; but its progress was stopped by shoals and difficult places which the navigators could not pass, so that he seems not to have made many conquests by sea. With the land forces Sesosis marched against the Ethiopians and Troglodites; whom he overcame, and obliged them to pay him a tribute of gold, ebony, and ivory. From thence he proceeded as far as the promontory of Dira, near the straits of Babelmandel, where he set up a pillar with an inscription in sacred characters. He then marched on to the country where cinnamon grows, probably some place in India; and here he in like manner set up pillars, which were to be seen for many ages after. As to his farther conquests, it is agreed by almost all authors of antiquity, that he over-ran and pillaged the whole continent of Asia, and some part of Europe. He crossed the Ganges, and erected pillars on its banks; and from thence he is said to have marched eastward to the very extremity of the Asiatic continent. Returning from thence, he invaded the Scythians and Thracians; but all authors do not agree that he conquered them. Some even affirm, that he was overthrown by them with great slaughter, and obliged to abandon a great part of his booty and military stores. But whether he had good or bad success in these parts, it is believed that he settled a colony in Colchis. Herodotus, however, who gives the most particular account of the conquests of this monarch, does not say whether the colony was designedly planted by Sesosis; or whether part of his army loitered behind, and took up their residence in that region. From his own knowledge,

he asserts, that the inhabitants of that country were undoubtedly of Egyptian descent. This was evident from the personal resemblance they bore to the Egyptians, who were swarthy-complexioned and frizzle-haired; but more especially from the conformity of their customs, particularly circumcision. The utmost boundary of this monarch's conquests, however, was in the country of Thrace; for beyond this country his pillars were no where to be seen. These pillars he set in every country which he conquered, with the following inscription, "Sesostris, king of kings, and lord of lords, subdued this country by the power of his arms." Besides these, he left also statues of himself; two of which, according to Herodotus, were to be seen in his time; the one on the road between Ephesus and Phocæa, and the other between Smyrna and Sardis: they were armed after the Ethiopian and Egyptian manner, holding a javelin in one hand and a bow in the other. The reasons given by Sesostris for returning into Egypt from Thrace, and thus leaving the conquest of the world unfinished, were the want of provisions for his army, and the difficulty of the passage. Most probably, however, his return was hastened by the intelligence he received from the high priest of Egypt, concerning the rebellious proceedings of his brother; who, encouraged by his long absence, had assumed the diadem, and violated the queen, and the royal concubines. On receiving this news, Sesostris hastened from Thrace; and at the end of nine years came to Pelusium in Egypt, attended by an innumerable multitude of captives taken from many different nations, and loaded with the spoils of Asia. His treacherous brother met him at the city; and it is said, (with very little probability,) that Sesostris accepted of an invitation to an entertainment from him. At this he drank freely, together with the queen and the rest of the royal family. During the continuance of the entertainment, Armais caused a great quantity of dried reeds to be laid round the apartment where they were to sleep; and as soon as they were retired to rest set fire to the reeds. Sesostris perceiving the danger he was in, and that his guards, overcharged with liquor, were incapable of assisting him, rushed through the flames, and was followed by his wife and children. In thanksgiving for this deliverance, he made several donations to the gods, particularly to Vulcan the god of fire. He then took vengeance on his brother Armais, said to be the DANAUS of the Greeks, who, being driven out of Egypt, withdrew into Greece. Sesostris now laid aside all thoughts of war, and applied himself wholly to such works as might tend to the public good, and his own future reputation. To prevent the incursions of the Syrians and Arabians, he fortified the E. side of Egypt with a wall, which ran from Pelusium through the desert to Heliopolis, for 187½ miles. He raised also an incredible number of vast and lofty mounts of earth, to which he removed such towns as had before been situated too low, to secure them from the inundations of the Nile. From Memphis to the sea he dug canals which branched out from the Nile; and not only made an easier communication between different places, but rendered the

country in a great measure impassable to any enemy. He erected a temple in every city in Egypt and dedicated it to the supreme deity of the place but in the course of this great undertaking, he took care to employ none of his Egyptian subjects. Thus he secured their affection, and employed the vast multitude of captives he had brought along with him; and to perpetuate the memory of transaction so remarkable, he caused it to be inscribed on all these temples, "No one native bore hereon." In the city of Memphis, before the temple of Vulcan, he raised six gigantic statues, each of one stone. Two of them were cubits high, representing himself and his wife; the other four were 20 cubits each, and represented his four sons. He raised also two obelisks of stone 120 cubits high, with inscriptions, denoting the greatness of his power, his revenues, &c. The captives taken by Sesostris are said to have been treated with the greatest barbarity; so that they resolved to deliver themselves from a multitude so intolerable. The Babylonians particularly were concerned in this revolt, and laid waste the country to some extent; but being offered pardon and a place to dwell in, they were pacified, and built a city, which they called Babel. Towards the conquered princes who waited on him with their tribute, the Egyptian monarch behaved with unparalleled insolence. On several occasions he is said to have unharnessed his horses, and, yoking kings together, made them draw his chariot. One day, however, observing some of the kings who drew his chariot to look upon the wheels with great earnestness, he asked what made him look so attentively at them; the unhappy prince replied, "O king, the revolutions of the wheel puts me in mind of the vicissitudes of fortune: for as every part of the wheel is uppermost and lowermost by turns, so is it men; who one day sit on a throne, and the next are reduced to the vilest degree of slavery." This answer brought the insulting conqueror to his senses; so that he gave over the practice, and thenceforth treated his captives with great humanity. At length this mighty monarch lost sight, and laid violent hands on himself.

(9.) EGYPT, HISTORY OF, FROM SESOSTRIS TO THE DEATH OF SETHON. After the death of Sesostris, we find another chasm of an indeterminate length in the Egyptian history. It concludes the reign of Amasis, or Amosis; who being tyrant, his subjects joined Actisanes the king of Ethiopia to drive him out.—Thus Actisanes came master of the kingdom; and after him follows another chasm in the history, during which the empire is said to have been in a state of anarchy for five generations.—This period brings down to the times of the Trojan war. The reigning prince in Egypt was at that time called Crotopus by the Greeks, Proteus. The priests report that he was a magician; and that he could assume any shape he pleased, even that of fire. The temple, as told by the Greeks, drew its origin from a custom among the Egyptians, perhaps introduced by Proteus. They were used to adore and distinguish the heads of their kings with the representations of animals or vegetables, or even burning incense, in order to strike the beholder

with the greater awe. Whilst Proteus reigned, Paris Alexander, the son of Priam king of Troy, was driven by a storm on the coast of Egypt, with his wife, whom he was carrying off from her husband. But when the Egyptian monarch heard of the breach of hospitality committed by Paris, he seized him, his mistress, and companions, with all the riches he had brought from Greece. He detained Helen, with all the effects belonging to Menelaus her husband, promising to restore them to the injured party whenever they were demanded; but commanded Paris and his companions to depart out of his dominions in three days. In what manner Paris afterwards prevailed upon Proteus to restore his mistress, we are not told; neither do we know any thing further of the transactions of this prince's reign nor of his successors, except what has entirely the air of fable, till the days of Sesostris the Ethiopian, who again conquered this kingdom. He began his reign with an act of great severity, causing the conquered prince to be burnt alive: nevertheless, he no sooner saw himself firmly established on the throne of Egypt, than he became a new man; so that he is highly extolled for his clemency, and wisdom. He is thought to have been the So mentioned in scripture, who entered into a league with Hoshea king of Israel against Salmanser king of Assyria. He is said to have been excited to the invasion of Egypt by a dream, in which he was assured, that he should hold that kingdom for 50 years. Accordingly, he conquered Egypt, as had been foretold; and at the expiration of the time above mentioned, he had another dream, in which the tutelary god of Egypt acquainted him, that he could no longer hold the kingdom of Egypt with safety and happiness, unless he massacred the priests as he passed through them with his guards. Being haunted by this vision, and at the same time abhorring the kingdom on such terms, he sent for the priests, and acquainted them with what seemed to be the will of the gods. Upon this it was decided, that it was their pleasure, that Sesostris should remain no longer in Egypt; and therefore he was immediately returned to Ethiopia. Sesostris, who was Sabbaco's immediate successor, we have no particulars worth notice. After him reigned SETHON, who was both king and priest of Vulcan. He gave himself up to religious contemplation; and not only neglected the military, but deprived them of their lands. At length they were so much incensed, that they entered into an agreement not to bear arms under him; in this state of affairs Sennacherib king of Assyria arrived before Pelusium with a mighty army. He now applied to his soldiers, but in vain; they unanimously persisted in refusing to march under his banner. Being therefore destitute of all arms, he applied to the god Vulcan, and begged him to deliver him from his enemies. He was yet in the temple of that god, it is said, when he fell into a deep sleep; during which, he saw Vulcan standing at his side, and exhorting him to take courage. He promised, that if Sesostris would but go out against the Assyrians, he would obtain a complete victory over them. Encouraged by this assurance, the king assembled a body of artificers, and labourers; and marched

towards Pelusium. He had no occasion, however, to fight; for the very night after his arrival at Pelusium, an innumerable multitude of field-rats, entering the enemy's camp, gnawed to pieces the quivers, bowstrings, and shield-straps. Next morning, when Sethon found the enemy disarmed, and beginning to fly, he pursued them to a great distance, making a terrible slaughter. In memory of this extraordinary event, a statue of Sethon was erected in the temple of Vulcan, holding in his hand a rat, with these words: "Whoever beholdeth me, let him be pious."

(10.) EGYPT, HISTORY OF, TILL ITS CAPTURE BY CAMBYSES. Not long after the death of Sethon, the form of government in Egypt was totally changed. The kingdom was divided into twelve parts, over which as many of the chief nobility presided. This division, however, subsisted but for a short time. PSAMMITICHUS, one of the twelve, dethroned all the rest, 15 years after the division had been made. The history now begins to be divested of fable; and from this time may be accounted equally certain with that of any other nation. The vast conquests of Sesostris were now no longer known; for Psammitichus possessed no more than the country of Egypt itself. It appears, indeed, that none of the successors of Sesostris, or even that monarch himself, had made use of any means to keep in subjection the countries he had once conquered. Perhaps, indeed, his design originally was rather to pillage than to conquer; and therefore, on his return, his vast empire vanished. Psammitichus, however, endeavoured to extend his dominions by making war on his neighbours; but, putting more confidence in foreign auxiliaries than in his own subjects, the latter were so much offended, that upwards of 200,000 fighting men emigrated in a body, and took up their residence in Ethiopia. To repair this loss, Psammitichus encouraged commerce, and opened his ports to all strangers, whom he greatly caressed, contrary to the impolitic maxims of his predecessors, who refused to admit them into the country. He also laid siege to Azotus in Syria, which held out for 29 years against the whole strength of the kingdom; from which it appears that Psammitichus was no great warrior. He is reported to have sent to discover the springs of the Nile: and is said to have made an attempt to discover the most ancient language and religion in the world. (See EDUCATION, Part II, Sect. IX.) NECTANES, the son and successor of Psammitichus, is the Pharaoh-Necho of scripture, and was a prince of an enterprising and warlike genius. In the beginning of his reign, he attempted to cut through the isthmus of Suez, between the Red Sea and the Mediterranean; but was obliged to abandon the enterprize, after having lost 200,000 men in the attempt. After this he sent a ship, manned with some expert Phœnician mariners, on a voyage to explore the coasts of Africa. Accordingly, they performed the voyage; sailed round the continent of Africa; and after three years returned to Egypt, where their relation was deemed incredible. The most remarkable wars in which this king was engaged, are recorded in the sacred writings. He went out against the king of Assyria, by the divine com-

mand, as he himself told Josiah; (ii. Chron. xxxv. 22.) but being opposed by this king, he defeated and killed him at Megiddo; after which he made his son Jehoahaz king and imposed on him an annual tribute of 100 talents of silver and one talent of gold. He then proceeded against the king of Assyria; and weakened him so much, that the empire was soon after dissolved. Thus he became master of Syria and Phœnicia; but in a short time, Nebuchadnezzar king of Babylon came against him with a mighty army. The Egyptian monarch, not daunted by the formidable appearance of his antagonist, boldly ventured a battle; but was overthrown with prodigious slaughter, and Nebuchadnezzar became master of all the country to the very gates of Pelusium. The reign of APRIES, the PHARAON HOPHRA of Scripture, presents us with a new revolution in the Egyptian affairs. He is said to have been a martial prince, and in the beginning of his reign very successful. He took by storm the rich city of Sidon; and having overcome the Cypriots and Phœnicians in a sea fight, returned to Egypt laden with spoil. This success probably incited Zedekiah king of Judeah to enter into an alliance with him against Nebuchadnezzar king of Babylon. The bad success of this alliance was foretold by the prophet Jeremiah; and accordingly it happened. For Nebuchadnezzar having sat down with his army before Jerusalem, Apries marched from Egypt to relieve the city; but no sooner did he perceive the Babylonians approaching him, than he retreated as fast as he could, leaving the Jews exposed to the rage of their merciless enemies; who were thereupon treated as Jeremiah had foretold; and by this step Apries brought upon himself the vengeance denounced by the same prophet.—The manner in which these predictions were fulfilled is as follows: the Cyreneans, a colony of the Greeks, being greatly strengthened by a numerous supply of their countrymen under their third king Battus styled *the Happy*, and encouraged by the Pythian oracle, began to drive out their Libyan neighbours, and share their possessions among themselves. Hereupon Andican king of Libya sent a submissive embassy to Apries, and implored his protection against the Cyreneans. Apries complied with his request, and sent a powerful army to his relief. The Egyptians were defeated with great slaughter; and those who returned complained that the army had been sent off by Apries in order to be destroyed, that he might 'tyrannize' without controul over the rest of his subjects. This thought catching the attention of the people, an almost universal defection ensued. Apries sent Amasis, his chief minister, to bring them back to a sense of their duty. But while Amasis was haranguing and advising them to return to their allegiance, the people brought the ensigns of royalty and proclaimed him king. See AMASIS. Apries then dispatched one Patarbemis, with orders to take Amasis, and bring him alive before him. This he found impossible; and therefore returned without his prisoner; at which the king was so enraged, that he commanded Patarbemis's nose and ears to be cut off. This piece of cruelty completed his ruin; for when the rest of the Egyptians, who had continued faithful to Apries, be-

held the inhuman mutilation of Patarbemis, they to a man deserted and went over to Amasis. Both parties now prepared for war; Amasis having under his command the whole body of native Egyptians; and Apries only those Ionians, Carians, and other mercenaries whom he could engage in his service. The army of Apries amounted only to 30,000; but, though greatly inferior in number to the troops of his rival, as he well knew that the Greeks were much superior in valour, he did not doubt of victory. Nay, so confident was Apries puffed up with this notion, that he did not believe it was in the power even of a God to deprive him of his kingdom. The two armies soon met, and drew up in order of battle near Memphis. A bloody engagement ensued, in which, though the army of Apries behaved with the greatest resolution, they were at last overpowered by numbers, and utterly defeated, the king himself being taken prisoner. Amasis did not take possession of the throne without opposition. He confined Apries in one of his palaces, but treated him with great care and respect. The people, however, were implacable, and could not be satisfied while he enjoyed his life. Amasis, therefore, at last found himself obliged to deliver him into their hands. Thus the prediction recorded in its final completion: Apries was delivered up, *those who sought his life*; and who no sooner had him in their power, than they strangled him, and laid his body in the sepulchre of his ancestors. During these intestine broils, which must have greatly weakened the kingdom, but most probably foretold the death of Apries, Nebuchadnezzar invaded Egypt. He had been for 13 years before employed in besieging Tyre, and at last had nothing but an empty city for his pains. To make himself some amends, therefore, he entered Egypt, harassed the country, killed and carried away great numbers of the inhabitants, so that the country did not recover from the effects of this incursion for a long time after. In this expedition, however, he seems not to have aimed at permanent conquest, but to have been induced merely by the love of plunder, of which he enriched with him an immense quantity to Babylon. Some say he assisted Amasis against Apries. During the reign of Amasis, Egypt is said to have flourished greatly, and to have contained 200 populous cities. That good order might be kept among such vast numbers of people, Amasis enacted a law, by which every Egyptian was bound once a-year to inform the governor of his province by what means he gained his livelihood; and if he failed of this, to put him to death. The same punishment he decreed to those who could not give a satisfactory account of themselves. The monarch very much favoured the Greeks, and married a woman of Grecian extract. To most Greek cities, as well as particular persons, he made considerable presents. He also allowed the Greeks in general to come into Egypt, and set either in the city of Naucratis, or carry on the trade upon the sea coasts; granting them temples, and places where they might erect temples to their own deities. He received also a law from Solon the celebrated Athenian lawgiver, and reduced the island of Cyprus under his subjects.

The prosperity of Egypt, however, ended with the death of Amasis, or indeed before it. The Egyptian monarch had some how or other incensed Cambyſes king of Perſia. The cauſe of the quarrel is uncertain; but whatever it was, the Perſian monarch vowed the deſtruction of Amasis. In the mean time PHANES of Halicarnaſſus, commander of the Grecian auxiliaries in the pay of Amasis, took ſome private diſguſt; and leaving Egypt, embarked for Perſia. He was a wiſe and able general, perfectly acquainted with every thing that related to Egypt; and had great credit with the Greeks in that country. Amasis was immediately ſenſible how great the loſs of this man would be to him, and therefore ſent after him a ſwift galley. Phanès was accordingly overtaken in Lycia, but not brought back; for, making his guard drunk, he continued his journey to Perſia, and preſented himſelf before Cambyſes, as he was meditating the overthrow of the Egyptian monarchy. At this dangerous criſis alſo, the Egyptian monarch imprudently made Polycrates, tyrant of Samos his enemy. This man had been the moſt remarkable monarch recorded in hiſtory, for an uninterrupted ſtrain of ſucceſs, without the intervention of one ſingle unfortunate event. Amasis, being at this time in ſtrict alliance with Polycrates, wrote him a letter, in which, after congratulating him on his proſperity, he told him that he was afraid left his ſubjects were too many, and he might be ſuddenly thrown down into the greateſt miſery. For this reaſon he adviſed him voluntarily to take away ſomething from his own happineſs; and to caſt away that which would grieve him moſt if he was accidentally to loſe it. Polycrates followed his advice, and threw into the ſea a ſignet of inſtimable value. This, however, did not anſwer the intended purpoſe. The ſignet happened to be ſwallowed by a fiſh, which was taken a few days afterwards, and thus was reſtored to Polycrates. At this Amasis was no ſooner informed, than, conſidering Polycrates as really unhappy, and alſo ſtanding on the brink of deſtruction, he reſolved to put an end to the frienſhip which ſubſiſted between them. For this purpoſe he diſpatched an herald to Samos, commanding him to acquaint Polycrates, that he renounced his alliance, and all the obligations between them; that he might not mourn his miſfortunes with the ſorrow of a friend. Thus Amasis left Polycrates at liberty to act againſt him, and accordingly he offered to aſſiſt Cambyſes with a fleet of ſhips in his Egyptian expedition. Amasis had not, however, the miſfortune to ſee the calamities of his country. He died about A. A. C. 525, after a reign of 44 years; and left the kingdom to his ſon Pfammenitus, juſt as Cambyſes was approaching the frontiers of the kingdom. The new prince was ſcarce ſeated on the throne, when the Perſians appeared. Pfammenitus drew together what forces he could, to prevent them from entering the kingdom. Cambyſes, however, immediately laid ſiege to Peluſium, and made himſelf maſter of it by the following ſtratagem: he placed in the front of his army a great number of cats, dogs, and other animals, that were deemed ſacred by the Egyptians. He then attacked the city, and took it without oppoſition;

the gariſſon, which conſiſted entirely of Egyptians, not daring to throw a dart or ſhoot an arrow againſt their enemies, leſt they ſhould kill ſome of the holy animals.

(II.) EGYPT, HISTORY OF, TILL THE DEATH OF ALEXANDER. Cambyſes had ſcarce taken poſſeſſion of the city, when Pfammenitus advanced againſt him with a numerous army. But before the engagement, the Greeks who ſerved under Pfammenitus, to ſhew their indignation againſt their treacherous countryman Phanès, brought his children into the camp, killed them in the preſence of their father and of the two armies, and then drank their blood. The Perſians, enraged at ſo cruel a ſight, fell upon the Egyptians with the utmoſt fury, put them to flight, and cut the greateſt part of them in pieces. Thoſe who eſcaped fled to Memphis, where they were ſoon after guilty of a horrid outrage. Cambyſes ſent a herald to them in a ſhip from Mitylene; but no ſooner did they ſee her come into the port, than they ſtocked down to the ſhore, deſtroyed the ſhip, and tore to pieces the herald and all the crew; afterwards carrying their mangled limbs into the city, in a kind of barbarous triumph. Not long after, they were obliged to ſurrender; and thus Pfammenitus fell into the hands of his inveterate enemy, who was now enraged beyond meaſure at the cruelties exerciſed upon the children of Phanès, the herald, and the Mitylenean ſailors. The rapid ſucceſs of the Perſians ſtruck with ſuch terror the Libyans, Cyreneans, Barcæans, and other dependents or allies of the Egyptian monarch, that they immediately ſubmitted. Nothing now remained but to diſpoſe of the captive king, and revenge on him and his ſubjects the cruelties which they had committed. This the merciless victor executed in the ſevereſt manner. On the 10th day after Memphis had been taken, Pfammenitus and the chief of the Egyptian nobility were ignominiouſly ſent into one of the ſuburbs of that city. The king being there ſeated in a proper place, ſaw his daughter coming along in the habit of a ſlave with a pitcher to fetch water from the river, and followed by the daughters of the greateſt families in Egypt, all in the ſame miſerable garb, with pitchers in their hands, drowned in tears, and loudly bemoaning their miſerable ſituation. When the fathers ſaw their daughters in diſtreſs, they burſt into tears, all but Pfammenitus, who only caſt his eyes on the ground and kept them fixed there. After the young women, came the ſon of Pfammenitus, with 2000 of the young nobility, with bits in their mouths and halters round their neck, led to execution. This was done to expiate the murder of the Perſian herald and the Mitylenean ſailors; for Cambyſes cauſed ten of the Egyptians of the firſt rank to be publicly executed for every one of thoſe that had been ſlain. Pfammenitus, however, obſerved the ſame conduct as before, keeping his eyes ſtedfaſtly fixed on the ground, though all the Egyptians around him made the loudeſt lamentations. A little after this he ſaw an intimate friend and companion, now advanced in years, who having been plundered of all he had, was begging his bread from door to door in the ſuburbs. Upon ſeeing this man, Pfammenitus wept

wept bitterly ; and calling out to him by his name, struck himself on the head as if he had been frantic. Of this the spies who had been set over him to observe his behaviour, gave immediate notice to Cambyfes, who thereupon sent to inquire the cause of fuch immoderate grief. Pfammenitus answered, that the calamities of his own family confounded him, and were too great to be lamented by any outward figns of grief ; but the extreme diftreffs of a bosom friend gave more room for reflection, and therefore extorted tears from him. With this answer Cambyfes was fo affected, that he fent orders to prevent the execution of the king's fon ; but thefe came too late, for the young prince had been put to death before any of the reft. Pfammenitus himfelf was then fent for into the city, and reftored to his liberty . and had he not fhewed a defire of revenge, might perhaps have been trusted with the government of Egypt ; but being difcovered hatching fchemes againft the government, he was feized, and condemned to drink bull's blood. The Egyptians were now reduced to the loweft degree of flavery. Their country became a province of the Perfian empire: the body of Amafis their late king was taken out of his grave ; and after being mangled in a fhocking manner, was finally burnt. But what feemed more grievous than all the reft, their god Apis was flain, and his priefts ignominioufly fcourged ; and this infpired the whole nation with fuch an hatred to the Perfians, that they could never afterwards be reconciled to them. As long as the Perfian empire fubfifted, the Egyptians could never fhake off their yoke. They frequently revolted indeed, but were always overthrown with prodigious lofs. At laft they fubmitted, without oppofition, to Alexander the Great ; after whose death, Egypt again became a powerful kingdom ; but from the conquest of it by Cambyfes to the prefent time, it has never been governed but by foreign princes, agreeable to the prophecy of Ezekiel, " There fhall be no more a prince of the land of Egypt."

(12.) EGYPT, HISTORY OF, TILL THE DEATH OF PTOLEMY EVERGETES. On the death of Alexander the Great, Egypt, together with Libya, and that part of Arabia which borders on Egypt, were affigned to PTOLEMY the fon of Lagus, as governor, under Alexander's fon by Roxana, who was but newly born. Nothing was farther from the intention of this governor, than to keep the provinces in truft for another. He did not, however, affume the title of *king*, till his authority was firmly eftablifhed; and this did not happen till 19 years after the death of Alexander, when Antigonus and Demetrius had unfuccefffully attempted the conquest of Egypt. From the time of his firft eftablifhment on the throne, Ptolemy, who had affumed the title of SOTER, reigned 40 years; which added to the former, 19, make up the 39 years which hiftorians commonly allow him to have reigned alone.—In the 39th year of his reign, he made his fon, PTOLEMY PHILADELPHUS, partner in the empire ; declaring him his fucceffor, to the prejudice of his eldeft fon named Ceraunus ; being excited thereto by his violent love for Berenice Philadelphus's mother. Upon this Ceraunus immediately quitted the court; and died at laft

into Syria, where he was kindly received by Seleucus Nicator, whom he afterwards ungratefully murdered. The moft remarkable tranfaction of this reign was the embellifhing of Alexandria, which Ptolemy made the capital of his new kingdom. See ALEXANDRIA. Ptolemy Soter died about A. A. C. 284, in the 41ft year of his reign, at 84th of his age. He was the beft prince of his race; and left behind him an example of piety, juftice, and clemency which few of his fucceffors followed. Befides the provinces originally affigned to him, he added to his empire thofe of Cælo-Syria, Ethiopia, Pamphylia, Lycia, Caria, and fome of the Cyclades. His fucceffor, Ptolemy Philadelphus, added nothing to the extent of the empire ; nor did he perform any thing remarkable except embellifhing further the city of Alexandria, enriching its library, caufing the old teftament to be tranflated into Greek, (See BIBLE, § V.) and entering into an alliance with the Romans. In his time, Magas, the governor of Libya and Cyrene, revolted ; and held that province as an independent prince, notwithstanding the utmoft efforts of Ptolemy to reduce him. At laft an accommodation took place ; and a marriage was propofed between Berenice, the only daughter of Magas, and Ptolemy's eldeft fon. The young princefs was to receive all her father's dominions by way of dowry, and thus they would again be brought under the dominion of Ptolemy's family. But before this treaty could be put in execution, Magas died ; and then Apamea, the princefs's mother, did all fhe could to prevent the match. This, however, fhe was not able to do : but her efforts for that purpofe produced a deftructive war for 4 years with Antiochus Theos king of Syria, and the acting of a bloody tragedy in the family of the latter. See SYRIA. About A. A. C. 246, Ptolemy Philadelphus died ; and was fucceeded by his eldeft fon Ptolemy, who had been married to Berenice the daughter of Magas. In the beginning of his reign, he found himfelf engaged in a war with Antiochus Theos king of Syria. From this he returned victorious, and brought with him 2500 ftatues and pictures, among which were many of the ancient Egyptian idols, which had been carried away by Cambyfes into Perfia. Thefe were reftored by Ptolemy to their ancient temples; in memory of which favour the Egyptians gave him the furname of EVERGETES, or *the Beneficent*. In this expedition he greatly enlarged his dominions, making himfelf mafter of all the countries that lie between mount Taurus and the confines of India. An account of thefe conquests was given by himfelf, infcribed on a monument, to the following effect. " Ptolemy Eurgetes, having received from his father the fovereignty of Egypt, Libya, Syria, Phœnicia, Cyprus, Lycia, Caria, and the other Cyclades, affembled a mighty army of horfe and foot, with a great fleet, and elephants, out of Trogloditia and Ethiopia ; fome of which had been taken by his father, and the reft by himfelf, and brought from thence, and trained up for war ; with this great force he failed into Asia ; and having conquered all the provinces which lie on this fide the Euphrates, Cilicia, Pamphylia, Ionia, the Hellespont, and Thrace, he croffed that river with all

the forces of the conquered countries, and the kings of those nations, and reduced Mesopotamia, Babylon, Susia, Persia, Media, and all the country as far as Bactria." On the king's return from the expedition, he passed through Jerusalem, where he offered many sacrifices to the God of Israel, and ever afterwards expressed a great favour for the Jewish nation. At this time, the Jews were tributaries to the Egyptian monarchs, and paid them annually 20 talents of silver. This tribute, however, Onias, who was then high priest, king of a very covetous disposition, had for a long time neglected to pay, so that the arrears amounted to a very large sum. Soon after his return, therefore, Ptolemy sent one of his courtiers named *Alibonion* to demand the money, and desired him to acquaint the Jews that he would make war upon them in case of a refusal. A young man, however, named *Joseph*, nephew to Onias, who only found means to avert the king's anger, became got himself chosen his receiver general, and by his faithful discharge of that important post, continued in high favour with Ptolemy as long as he lived. Ptolemy Euergetes having at last concluded a peace with Seleucus, the successor of Antiochus Theos, attempted the enlargement of his dominions on the S. side. In this he was attended with such success, that he made himself master of all the coasts of the Red Sea, both on the Arabian and Ethiopian sides, quite down to the straits of Babel-mandel. On his return he was sent ambassadors from the Achæans, imploring his assistance against the Etolians and Lacedæmonians. This the king readily promised them: but they having in the mean time engaged Antigonus king of Macedon to support them, Ptolemy was so much offended, that he sent powerful succours to Cleomenes III. king of Sparta; hoping, by that means, to humble both the Achæans and their ally Antigonus. In this however he was disappointed; for Cleomenes, after having gained very considerable advantages over the enemy, was at last entirely defeated in the battle of Sellasia, and obliged to take refuge in Ptolemy's dominions. He was received by the Egyptian monarch with the greatest kindness; a yearly pension of 24 talents was assigned him, with a promise of restoring him to the Spartan throne; but before this could be accomplished, Ptolemy died, in the 27th year of his reign, and was succeeded by his son Ptolemy Philopater. Thus we have seen the Egyptian empire brought to a very great height of power; and had the succeeding monarchs been careful to preserve that strength of empire transferred to them by Euergetes, it is probable that Egypt might have been able to hold the balance against Rome, and after the destruction of Carthage to have prevented that haughty city from becoming mistress of the world. But after the death of Ptolemy Euergetes, the Egyptian empire, being governed either by weak monarchs, or wicked monsters, quickly declined, and from that time makes no conspicuous figure in history, except in the depravity of some of its kings, where, in many, indeed, vie with any nation.

(10) EGYPT. HISTORY OF, TILL THE DEATH OF PTOLEMY PHILOMETOR. Ptolemy Philopater began his reign with the murder of his brother

Magas; after which, giving himself up to all manner of licentiousness, the kingdom fell into a kind of anarchy. Cleomenes the Spartan king still resided at court; and being now unable to bear the dissolute manners which prevailed there, he pressed Philopater to give him the assistance he had promised for restoring him to the throne of Sparta. This he rather insisted upon, because he had received advice that Antigonus king of Macedon was dead, that the Achæans were engaged in a war with the Etolians, and that the Lacedæmonians had joined the latter against the Achæans and Macedonians. Ptolemy, when afraid of his brother Magas, had indeed promised to assist the king of Sparta with a powerful fleet, hoping thus to attach him to his own interest: but now when Magas was out of the way, it was determined by the king, or rather his ministers, that Cleomenes should not be assisted, nor even allowed to leave the kingdom; and this extravagant resolution produced the desperate attempt of Cleomenes, of which an account will be found in the history of SPARTA. Of the disorders which now ensued, Antiochus king of Syria, surnamed *the Great*, took the advantage, and attempted to wrest from Ptolemy the provinces of Cælo-Syria and Palestine. But in this he was finally disappointed; and might easily have been totally driven out of Syria, had not Ptolemy been too much taken up with his debaucheries to think of carrying on the war. The discontent occasioned by this piece of negligence soon produced a civil war in his dominions, and the whole kingdom continued in the utmost confusion till his death, which happened in the 17th year of his reign and 37th of his age. During the reign of Philopater happened a very extraordinary event with regard to the Jews, which is recorded in the iii. Book of Maccabees; chap. 2, 3, 4, 5. The king of Egypt, while on his Syrian expedition, had attempted to enter the temple of Jerusalem; but being hindered by the Jews, he was filled with the utmost rage against the whole nation. On his return to Alexandria, he resolved to make those who dwell in that city feel the first effects of his vengeance. He began with publishing a decree, which he caused to be engraved on a pillar erected for that purpose at the gate of his palace, excluding all those who did not sacrifice to the gods worshipped by the king. Thus the Jews were debarred from suing to him for justice, or protection. By the favour of Alexander the Great, Ptolemy Soter, Philadelphus and Euergetes, the Jews enjoyed at Alexandria the same privileges with the Macedonian. In that metropolis the inhabitants were divided into three classes. In the first were the Macedonians, or original founders of the city, and along with them were enrolled the Jews; in the 2d were the mercenaries who had served under Alexander; and in the 3d the native Egyptians. Ptolemy now, to be revenged of the Jews, ordered that they should be degraded from the first rank, and enrolled among the native Egyptians; and that all of that nation should appear at an appointed time before the proper officers, to be enrolled among the people; that at the time of their enrollment they should have the mark of an ivy leaf, the badge of Bacchus, impressed with a hot iron

on their faces; that all who were thus marked should be made slaves; and, lastly, that if any one should stand out against this decree, he should be immediately put to death. That he might not, however, seem an enemy to the whole nation, he declared, that those who sacrificed to his gods should enjoy their former privileges, and remain in the same class. Yet, notwithstanding this tempting offer, 300 only out of many thousand Jews who lived in Alexandria could be prevailed upon to abandon their religion in order to save themselves from slavery. The apostates were immediately excommunicated by their brethren: and this their enemies construed as done in opposition to the king's order; which threw the tyrant into such a rage, that he resolved to extirpate the whole nation, beginning with the Jews who lived in Alexandria and other cities of Egypt, and proceeding from thence to Judæa and Jerusalem itself. In consequence of this cruel resolution, he commanded all the Jews that lived in any part of Egypt to be brought in chains to Alexandria, and there to be shut up in the Hippodrome, which was a very spacious place without the city, where the people used to assemble to see horse-races and other public diversions. He then sent for Herman master of the elephants; and commanded him to have 300 of these animals ready against the next day, to let loose upon the Jews in the Hippodrome. But when the elephants were prepared for the execution, and the people were assembled in great crowds to see it, they were for that day disappointed by the king's absence. For, having been late up the night before with some of his debauched companions, he did not awake till the time for the show was over, and the spectators returned home. He therefore ordered one of his servants to call him early on the following day, that the people might not meet with a second disappointment. But when the servant awaked him the king was not yet returned to his senses; having withdrawn, exceedingly drunk, only a short time before. As he did not remember the order, he therefore fell into a violent passion, and threatened with death the servant who had awaked him? and this caused the show to be put off till the third day. At last the king came to the Hippodrome attended with a vast multitude of spectators; but when the elephants were let loose, instead of falling upon the Jews, they turned their rage against the spectators and soldiers, and destroyed great numbers of them. At the same time, some frightful appearances which were seen in the air so terrified the king, that he commanded the Jews to be immediately set at liberty, and restored them to their former privileges. No sooner were they delivered from this danger than they demanded leave to put to death such of their nation as had abandoned their religion; which being granted, they dispatched the 300 apostates. Philopater was succeeded by *Ptolemy Epiphanes*; and he, after a reign of 24 years, by *Ptolemy Philometor*. In the beginning of his reign, a war commenced with the king of Syria, who had seized on the provinces of Coelo Syria and Palestine in the preceding reign. In the course of this war, Philometor was either voluntarily delivered up to Antiochus, or taken prisoner. But however this was, the Alexandri-

ans despairing of his ever being able to recover his liberty, raised to the throne his brother *Ptolemy* who took the name of *Euergetes II.* but was afterwards called *Physcon*, or *the big-bellied*, on account of the prominent belly, which by his gluttony and luxury he had acquired. He was seated on the throne, however, when Antiochus Epiphanes, returning into Egypt, drove out *Physcon*, and restored the whole kingdom, except Palestine, to *Philometor*. His design was to kind a war betwixt the two brothers, so that he might have an opportunity of seizing the kingdom. For this reason he kept to himself the city of Pelusium by which, being the key of Egypt, he might to his pleasure re-enter the country. But *Philometor*, apprised of his design, invited his brother *Physcon* to an accommodation; which was happily effected by their sister *Cleopatra*. The brothers agreed to reign jointly, and to oppose to the most of their power *Antiochus*, whom they considered as a common enemy. On this the king of Syria invaded Egypt with a great army, but was prevented by the Romans from conquering. The two brothers were no sooner freed from the apprehension of a foreign enemy, than they began to quarrel with each other. Their differences soon came to such a height, that the Romans at last interposed. But before the ambassadors employed to inquire into the merits of the case could arrive in Egypt, *Physcon* had driven *Philometor* from the throne, and obliged him to quit the kingdom. On this the dethroned prince fled to Rome, where he appeared meanly dressed, and without attendants. He was very kindly received by the senate; who were so well satisfied of the injustice done him, that they immediately decreed his restoration. He was reconducted accordingly; and on the arrival of the ambassadors in Egypt an accommodation was negotiated, whereby *Physcon* was put in possession of Libya and Cyprus and *Philometor* of all Egypt and the island of Cyprus; each of them being declared independent of the other. The treaty, as usual, was confirmed with oaths and sacrifices, and was broken almost as soon as made. *Physcon* was dissatisfied with his share of the dominions: and therefore sent ambassadors to Rome, desiring that the island of Cyprus might be added to his other possession. This could not be obtained by the ambassadors; and therefore *Physcon* went to Rome in person. His demand was evidently unjust; but the Romans, considering it their interest to weaken the power of Egypt as much as possible, adjudged the island to him. *Physcon* set out from Rome with two ambassadors; and arriving in Greece on his way to Cyprus, he raised there a great number of mercenaries, with a design to sail immediately to that island and conquer it. But the Roman ambassadors telling him, that they were commanded to put him in possession of it by fair means and not by force, he dismissed his army, and returned to Libya, while one of the ambassadors proceeded to Alexandria. Their design was to bring the two brothers to an interview on the frontiers of their dominions, and there to settle matters amicably. But the ambassador who went to Alexandria, found *Philometor* very averse from compliance with the decree of the senate. He

part of the ambassador so long, that Physcon sent the other also to Alexandria, hoping that the joint professions of the two would induce Philometor to comply. But the king after entertaining them at an immense charge for 40 days, at last refused to submit, and told the ambassadors that he was resolved to adhere to the first treaty. With this answer the Roman ambassadors departed, and were followed by others from the two brothers. The senate, however, not only confirmed their decree in favour of Physcon, but renounced their alliance with Philometor, and commanded his ambassadors to leave the city in five days. In the meantime, the inhabitants of Cyrene having heard favourable accounts of Physcon's behaviour during the short time he reigned in Alexandria, conceived so strong an aversion against him, that they refused to keep him out of their country by force. On receiving intelligence of this resolution, Physcon dropped all thoughts of Cyprus at present; and hastened with all his forces to Cyrene, where he soon established himself in kingdom. His vicious and tyrannical conduct, however, increased the aversion of the Cyrenians, such that some of them entering into a conspiracy against him, fell upon him one night as he was returning to his palace, wounded him in several places, and left him for dead on the spot. This being in the charge of his brother Philometor; and as soon as he was recovered, took another journey to Rome. Here he made his complaints to the senate, and showed them the scars of his wounds, accusing his brother of having employed assassins to murder him. Though Philometor was known to be a man of a most humane and mild disposition, and therefore very unlikely to have been concerned in so black an attempt; yet the king being offended at his refusing to submit to the decree concerning Cyprus, bearkened to this accusation; and not only refused to hear his ambassadors had to say, but ordered them immediately to depart from the city. At the same time, they appointed five commissioners to send Physcon into Cyprus, and put him in possession of that island, enjoining all their allies and parts to supply him with forces. Physcon thus got together an army which seemed sufficient for the accomplishment of his design landed in Cyprus; but being there encountered by Philometor in person, he was entirely defeated, and obliged to shelter himself in the fortified *Lapitho*. Here he was closely besieged, and last obliged to surrender. Every one now expected that Physcon would have been treated with clemency; but his brother, instead of punishing him to the government of Libya and adding some other territories instead of the island of Cyprus, and promising him his daughter in marriage. Thus an end was put to the war between the two brothers; for the Romans were no longer to oppose a prince who had manifested a signal instance of his justice and clemency. On his return to Alexandria, Philometor appointed one Archias governor of Cyprus. Some time after the king's departure, agreed with Demetrius king of Syria, to betray the island to him for 500 talents. The treachery was discovered before it took effect; and the traitor, to

avoid the punishment due to his crime, killed himself. Ptolemy being offended with Demetrius for this attempt on Cyprus, joined Attalus king of Pergamus, and Ariarathes king of Cappadocia, in setting up a pretender to the crown of Syria. This was Alexander Balas; to whom he even gave his daughter Cleopatra in marriage, after he had placed him on the throne of Syria. But he notwithstanding these and many other favours, being suspected of having entered into a plot against his benefactor, Ptolemy became his greatest enemy; and marching against him, routed his army in the neighbourhood of Antioch. He did not, however, long enjoy his victory; for he died in a few days after the engagement, of the wounds he had received.

(14.) EGYPT, HISTORY OF, TILL THE DEATH OF PTOLEMY PHYSCON, THE NERO OF EGYPT. On the death of Philometor, Cleopatra the queen designed to secure the throne for her son. But some of the principal nobility declaring for Physcon, a civil war was about to ensue, when matters were compromised on condition that Physcon should marry Cleopatra, that he should reign jointly with her during his life, and declare her son by Philometor heir to the crown. These terms were no sooner agreed upon than Physcon married Cleopatra, and, on the very day of the nuptials, murdered her son in her arms. This was only a prelude to the cruelties which he afterwards committed on his subjects. He first put to death all those who had shown any concern for the murder of the young prince. He then wrecked his fury on the Jews, whom he treated more like slaves than subjects, on account of their having favoured the cause of Cleopatra. His own people were treated with little more ceremony. Numbers of them were every day put to death for the smallest faults, and often for no fault at all, but merely to gratify his inhuman temper. His cruelty towards the Alexandrians is related under the article ALEXANDRIA. He divorced his queen, who was also his sister, and married her daughter, who was likewise called *Cleopatra*, and whom he had previously ravished. In short, his behaviour was so exceedingly wicked, that it soon became quite intolerable to his subjects; and he was obliged to fly to the island of Cyprus with his new queen, and Memphitis, a son he had by her mother. On the flight of the king, the divorced queen was placed on the throne by the Alexandrians; but Physcon, fearing lest a son whom he had left behind should be appointed king, sent for him into Cyprus, and caused him to be assassinated as soon as he landed. This provoked the people against him to such a degree, that they pulled down and dashed to pieces all the statues which had been erected to him in Alexandria. This the tyrant supposed to have been done at the instigation of the queen, and therefore resolved to revenge it on her by killing his own son whom he had by her. He therefore, without the least remorse, caused the young prince's throat to be cut; and having put his mangled limbs into a box, sent them as a present to his mother Cleopatra. The messenger with whom this box was sent, was one of his guards. He was ordered to wait till the queen's birth-day, which approached, and was to be celebrated.

celebrated with extraordinary pomp; and in the midst of the general rejoicing, he was to deliver the present. The horror and detestation occasioned by this unparalleled piece of barbarity cannot be expressed. An army was soon raised, and the command of it given to one Marias, whom the queen had appointed general, and enjoined to take all the necessary steps for the defence of the country. On the other hand, Physcon, having hired a numerous body of mercenaries, sent them, under the command of Hegelochus, against the Egyptians. The two armies met on the frontiers of Egypt, and a bloody battle ensued, wherein, however, the Egyptians were entirely defeated, and Marias was taken prisoner. Every one expected that the captive general would have been put to death with the severest torments; but Physcon, perceiving that his cruelties only exasperated the people, resolved to try whether he could regain their affections by lenity; and therefore pardoned Marias, and set him at liberty. Cleopatra, being greatly distressed by this overthrow, demanded assistance from Demetrius king of Syria, who had married her eldest daughter by Philometor, promising him the crown of Egypt for his reward. Demetrius accepted the proposal, marched with all his forces into Egypt, and laid siege to Pelusium. But he being no less hated in Syria than Physcon was in Egypt, the people of Antioch, taking advantage of his absence, revolted against him, and were joined by most of the other cities in Syria. Thus Demetrius was obliged to return; and Cleopatra, being now in no condition to oppose Physcon, fled to Ptolemais, where her daughter the queen of Syria resided. Physcon was then restored to the throne of Egypt, which, notwithstanding his crimes, he enjoyed till his death; which happened at Alexandria, in the 29th year of his reign, and 67th of his age.

(15.) EGYPT, HISTORY OF, TILL THE DEATH OF QUEEN CLEOPATRA. To Physcon succeeded PTOLEMY LATHYRUS, about A. A. C. 122; but he had not reigned long, before his mother, finding that he would not be entirely governed by her, by false surmises stirred up the Alexandrians, who drove him from the throne; and placed on it his youngest brother ALEXANDER. Lathyrus after this was obliged to content himself with the government of Cyprus, which he was permitted to enjoy in quiet. Ptolemy Alexander, in the mean time, finding he was to have only the shadow of sovereignty, and that his mother Cleopatra was to have all the power, stole away privately from Alexandria. The queen used every artifice to bring him back, well knowing that the Alexandrians would never suffer her to reign alone. At last her son yielded to her intreaties; but soon after understanding that she had hired assassins to dispatch him, he caused her to be murdered. The death of the queen was no sooner known to the Alexandrians, than, disdaining to be commanded by a parricide, they drove out Alexander, and recalled Lathyrus. The deposed prince for some time led a rambling life in the island of Cos; but having got together some ships, he, the next year, attempted to return into Egypt. But being met by Tyrrhus, Lathyrus's admiral, he was defeated, and obliged to fly to Myra in Lycia. From Myra

he steered towards Cyprus, hoping that the inhabitants would place him on the throne, instead of his brother. But Charcas, another of Lathyrus's admirals, coming up with him while he was to land, an engagement ensued, in which Alexander's fleet was dispersed, and himself killed. During these disturbances, Apion king of Cyrene the son of Ptolemy Physcon by a concubine, having maintained peace and tranquillity in his dominions during a reign of 21 years, died, and his will left his kingdom to the Romans; and the Egyptian empire was considerably reduced and circumscribed. Lathyrus being now driven from all competitors, turned his arms against the city of Thebes, which had revolted from him. He marched in person against the rebels; having defeated them in a pitched battle, he laid a close siege to their city. The inhabitants defended themselves with great resolution for three months, but were at last obliged to submit, and the city was given up to be plundered by the soldiers. They left every where the most melancholy monuments of their avarice and cruelty; so that Thebes, which till that time had been one of the wealthiest cities of Egypt, was now reduced to such a state that it never afterwards made any figure.

A. A. C. 76, Ptolemy Lathyrus was succeeded by ALEXANDER II, the son of Ptolemy Alexander. He was first sent by Cleopatra into the island of Cos, with a great sum of money, and all the necessaries, as thinking that the safest place where he could be kept. When Mithridates king of Pontus made himself master of that island, the inhabitants delivered up to him the young Egyptian prince together with all the treasures. Mithridates gave him an education suitable to his birth; but not thinking himself safe with a prince who had shed the blood of his own children, fled to the camp of Sylla the Roman dictator, who was then making war in Asia. From that time he lived in the family of the Roman general, till news was brought to Rome of the death of Lathyrus. Sylla then sent him to Egypt to take possession of the throne. But, before his arrival, the Alexandrians had chosen Cleopatra for their sovereign. To comply with their matters, however, it was agreed, that Alexander should marry her, and take her for his part to the throne. This was accordingly done; and 15 days after the marriage, he murdered her, and 15 years afterwards showed himself such a master of wickedness, that a general insurrection ensued among his subjects; and he was obliged to fly to Pompey the Great, who was then engaged in the war against Mithridates king of Pontus. But Pompey refusing to concern himself in this matter, he retired to Tyre, where he died some months after. Alexander, while he was in Tyre, had sent ambassadors to Rome, to influence the senate in his favour. But, dying before the embassy was finished, he made over by his last will all his rights to the Roman people, declaring his heirs to his kingdom: not out of any affection to the republic, but with a view to raise a dispute between the Romans and his rival Auletes, whom the Egyptians had placed on the throne. Alexander's will was brought to Rome, where it occasioned warm debates. Some were for taking immediate possession of Egypt. Others thought no more of it.

taken of such a will, because Alexander
 had a right to dispose of his dominions in pre-
 judice of his successor, and to exclude from the
 throne those who were of the royal blood of E-
 gypt. Cæsar represented, that such a notorious
 violation would debase the majesty of the Roman
 empire, and involve them in endless wars and dis-
 sent; that the fruitful fields of Egypt would be
 a temptation to the avarice of the people,
 and would insist on their being divided among
 them; and lastly, that by this means the bloody
 wars about the Agrarian laws would be re-
 vived. These reasons had some weight with the se-
 nate, but what chiefly prevented them from se-
 parating Egypt at this time was, that they had
 just taken possession of the kingdom of Bithynia
 by the will of Nicomedes, and of Cyrene
 by the will of Apion. They thought,
 that if they should, on the like pretence,
 divide the kingdom of Egypt, this
 would much expose their design of setting up
 a universal empire, and occasion a formi-
 dable combination against them. **PTOLEMY AU-
 GUSTUS**, who was now raised to the throne by the
 Romans, is said to have surpassed all the kings
 that preceded him in the effeminacy of his man-
 ners. The surname *Auletes*, which signifies the
 piper, was given him because he piqued him-
 self in skill in performing upon that instru-
 ment, and was not ashamed even to contend for
 the prize in the public games. He took great
 pleasure in imitating the manners of the Baccha-
 ntes, in wearing a female dress, and in the same
 manner that they used during the solemnity of
 the festival; and hence he had the surname of the
Diogenes or *Bacchanus*. As his title to the
 throne was disputable, (he being only the son of a
 king,) his first care was to get himself ac-
 knowledged by the Romans, and declared their
 ally. This was obtained by applying to Julius
 Cæsar, who was at that time consul, and im-
 mediately in debt. Cæsar being glad of such an
 opportunity of raising money, made the king of
 Egypt pay pretty dear for his alliance. Six thou-
 sand talents, a sum equal to £.1,162,500 sterling,
 were given partly to Cæsar himself, and partly to
 the king, whose interest was necessary for obtaining
 the consent of the people. Though the revenues
 of Egypt amounted to twice this sum, yet Auletes
 found it impossible for him to raise it without se-
 verely taxing his subjects. This occasioned a ge-
 neral discontent; and while the people were al-
 ready ready to take up arms, a most unjust decree
 was passed at Rome for seizing the island of Cyprus.
 The Alexandrians heard of this, they pressed
 to demand that island as an ancient ap-
 partenance of Egypt; and, in case of a refusal, to
 make war against that haughty and imperious
 king, who, they now saw, though too late, aimed
 at nothing less than the sovereignty of the
 East. With this request the king refused to
 comply; upon which his subjects, already pro-
 voked beyond measure at the taxes with which
 they were loaded, flew to arms, and surrounded
 the king. The king had the good luck to escape
 the hands of his subjects, and immediately leaving Alexandria,
 fled for Rome. In his way to that city, he
 landed on the island of Rhodes, where the famous

Cato at that time was, being on his way to Cyprus,
 to put the unjust decree of the senate in execution.
 Auletes, desirous to confer with a man of his pru-
 dence, immediately sent to acquaint him with his
 arrival. He imagined, that, upon this notice, Cato
 would instantly come and wait upon him; but
 the proud Roman told the messenger, that if the
 king of Egypt had any thing to say to Cato, he
 might come to his house. Accordingly the king
 went to pay him a visit; but was received with
 very little ceremony by Cato, who did not even
 vouchsafe to rise out of his seat when he came into
 his presence. When Auletes had laid his affairs
 before this haughty republican, he was blamed by
 him for leaving Egypt, the richest kingdom in the
 world, in order to expose himself, as he said, to
 the indignities he would meet with at Rome.
 There Cato told him, that nothing was in request
 but wealth and grandeur. All the riches of Egypt,
 he said, would not be sufficient to satisfy the a-
 varice of the leading men in Rome. He therefore
 advised him to return to Egypt; and strive, by a
 more equitable conduct, to regain the affections
 of his people. He even offered to reconduct him
 thither, and employ his good offices in his behalf.
 But though Ptolemy was sensible of the propriety
 of this advice, the friends he had with him dis-
 suaded him from following it, and accordingly he
 set out for Rome. On his arrival, he found, to
 his great concern, that Cæsar, in whom he con-
 sidered, was then in Gaul. He was received, how-
 ever, by Pompey with great kindness. He assign-
 ed him an apartment in his own house, and omit-
 ted nothing that lay in his power to serve him.
 But, notwithstanding the protection of so power-
 ful a man, the Egyptian monarch was obliged to
 go from house to house like a private person, soli-
 citing the votes of the senators. After he had
 spent immense treasures in procuring a strong
 party in the city, he was at last permitted to lay
 his complaints before the senate; and at the same
 time there arrived an embassy from the Alexandri-
 ans, consisting of 100 citizens, to acquaint the se-
 nate with the reasons of their revolt. When Au-
 letes first set out for Rome, the Alexandrians, not
 knowing what was become of him, placed on the
 throne his daughter Berenice; and sent an embassy
 into Syria to Antiochus Asiaticus, inviting him into
 Egypt to marry the queen, and reign in partner-
 ship with her. Antiochus was dead before the ar-
 rival of the ambassadors; upon which the same
 proposal was made to his brother Seleucus, who
 readily accepted it. This Seleucus is described
 by Strabo as monstrously deformed in body, and
 still more so in mind. The Egyptians nicknamed
 him *Cybisades*, or *the Skulls*. He was scarce
 on the throne, when he gave a signal instance of
 his avaricious temper. Ptolemy I. had caused the
 body of Alexander the Great to be deposited in a
 coffin of massy gold. This the king seized upon;
 and thus provoked his wife Berenice to such a de-
 gree, that she caused him to be murdered. She
 then married one Archelaus, high priest of Comana
 in Pontus, who pretended to be the son of Mithri-
 dates the Great; but was, in fact, only the son of
 that monarch's general. Auletes was not a little
 alarmed on hearing of these transactions, especial-
 ly when the ambassadors arrived, who he feared

would overturn all the schemes he had laboured so much to bring about. The embassy was headed by one Dion, a celebrated academic philosopher, who had many powerful friends at Rome. But Ptolemy found means to get both him and most of his followers assassinated; and this intimidated the rest to such a degree, that they durst not execute their commission, or, for some time, even demand justice for the murder of their colleagues. The report of so many murders, however, at last spread a general alarm. Auletes, sure of the protection of Pompey, did not scruple to own himself the perpetrator of them. Nay, though an action was commenced against one Asclepius, an assassin, who had stabbed Dion the chief of the embassy above mentioned, and the crime was fully proved; yet he was acquitted by the venal judges, who had all been bribed by Ptolemy. In a short time, the senate passed a decree, by which it was enacted, that the king of Egypt should be restored by force of arms. All the great men in Rome were ambitious of this commission; which, they well knew, would be attended with immense profit. Their contests on this occasion took up a considerable time; but at last a prophecy of the Sybil was found out, which forbade the assisting an Egyptian monarch with an army. Ptolemy, therefore, wearied out with so long a delay, retired from Rome, where he had made himself generally odious, to the temple of Diana at Ephesus, there to wait the decision of his fate. Here he remained a considerable time: but as he saw that the senate came to no resolution, though he solicited them by letters, he at last, by Pompey's advice, applied to Gabinius, the proconsul of Syria. This Gabinius was a man of a most infamous character, and ready to undertake any thing for money. Therefore, though it was contrary to an express law for any governor to go out of his province, without positive orders from the senate and people of Rome, yet Gabinius ventured to transgress this law, upon condition of being well paid. As a recompense for his trouble, however, he demanded 10,000 talents; that is, £. 1,937,500 sterling. Ptolemy, glad to be restored on any terms, agreed to pay the above mentioned sum; but Gabinius would not stir till he had received one half of it. This obliged the king to borrow it from a Roman knight, named *Caius Rabirius Posthumus*; Pompey interposing his credit and authority for the payment of the capital and interest. Gabinius now set out for Egypt, attended by the famous Mark Anthony, who at this time served in the army under him. He was met by Archelaus, who since the departure of Auletes had reigned in Egypt jointly with Berenice, at the head of a numerous army. The Egyptians were utterly defeated, and Archelaus taken prisoner in the first engagement. Thus Gabinius might have put an end to the war at once: but his avarice prompted him to dismiss Archelaus on his paying a considerable ransom; after which, pretending that he had made his escape, fresh sums were demanded from Ptolemy for defraying the expences of the war. For these sums Ptolemy was again obliged to apply to Rabirius, who lent him what money he wanted at a very high interest. At last, however, Archelaus was defeated and killed, and thus Ptolemy again

became master of all Egypt. No sooner was he firmly settled on the throne, than he put to death his daughter Berenice, and oppressed his people with the most cruel exactions, in order to procure the money he had been obliged to borrow while in a state of exile. These oppressions and exactions the cowardly Egyptians bore with great patience, being intimidated by the garrison which Gabinius had left in Alexandria. But neither the fear of the Romans, nor the authority of Ptolemy could make them put up an affront offered to their religion. A Roman soldier happened to *kill a cat*, an animal held sacred and even worshipped by the Egyptians; and no sooner was this supposed sacrilege known, than the Alexandrians rose in a general insurrection, and, gathering together crowds, made their way through the Roman guards, dragged the soldier out of his house, and in spite of all opposition, tore him in pieces. Withstanding the heavy taxes, however, which Ptolemy laid on his people, it doth not appear that he had any design of paying his debts. Rabirius, who, as we have already observed, lent him immense sums, finding that the king effected delays, took a voyage to Egypt, to exhort him in person. Ptolemy excused himself on account of the bad state of his finances, but offered to make Rabirius collector general of his revenues, that he might in that employment pay himself. Rabirius accepted the employment for fear of losing his debt. But Ptolemy, sooner, upon some frivolous pretence or other, cast him and all his servants to be closely confined. This base conduct exasperated Pompey as much as Rabirius; for the former had been in a great security for the debt, as the money had been paid at his request, and the business transacted at country house of his near Alba. However, as Rabirius had reason to fear the worst, he took the first opportunity of making his escape, glad to get off with life from his faithless debtor. To complete his misfortunes, he was prosecuted at Rome as soon as he returned, 1. For having endeavoured to corrupt the senate with sums lent for that purpose. 2. For having debased and dishonoured the character of a Roman knight, by farming the revenues, and becoming the servant of a foreign prince. 3. For having been accomplice with Gabinius, and sharing with him the 10,000 talents, which that proconsul had received for his Egyptian expedition. By the eloquence of Cicero, he was acquitted; and one of the orations to be found in the writings of that author was composed on this occasion. Gabinius was also prosecuted; and, as Cicero spoke against him, he very narrowly escaped death. He was, however, condemned to perpetual banishment, and having been stripped of all he was worth, lived in exile till the time of the civil wars, when he was recalled by Cæsar, in whose service he spent his life. Auletes enjoyed the throne of Egypt about four years after his re-establishment; and his death left his children, a son and two daughters, under the tuition of the Roman people. The name of the son was *Ptolemy*, those of the daughters were *CLEOPATRA* and *Arinoe*. The first was the Cleopatra who afterwards became so famous, and had so great a share in the civil wars.

of Rome. As the transactions of that queen's reign, however, are so closely connected with the affairs of Rome, that they cannot be well understood without knowing the situation of the Roman empire at that time, we refer for an account of them to the history of ROME. With Cleopatra ended the family of Ptolemy Lagus, the founder of the Grecian empire in Egypt, after it had held that country in subjection for the space of 294 years.

(14.) EGYPT, HISTORY OF, TILL THE ESTABLISHMENT OF THE KHALIFS. Egypt now became a province of the Roman empire, and continued so till the emperors of Rome or Constantinople. In the year 642, it was conquered by the Arabians under Amru Ebn Al Aas, one of the generals of the khalif Omar. In 889, an independent government was set up in this kingdom by Ahmed ibn Tolum, who rebelled against Al Mokhadi of Bagdad. It continued to be governed by him and his successors for 27 years, when it was again reduced by Al Moctafi khalif of Bagdad. In about 30 years after, we find it again an independent state, being joined with Syria under Mahomet Ebn Taj, who had been appointed governor of these provinces. This government, however, was also but short-lived; for in 968 it was conquered by Jawhar, one of the generals of the Fatemite khalif of Cairwan in Barbary. No sooner was Moez informed of the death of his general, than he prepared with expedition to go and take possession of his new conquest. Accordingly, he ordered all the vast treasures of gold which he and his predecessors had accumulated to be cast into ingots of the size and shape of mill-stones used in hand-mills, and conveyed on camels backs into Egypt. To shew that he was fully determined to abandon his dominions in Barbary, and to make Egypt the royal residence, he caused the remains of the three former khalifs of his race to be removed from Cairwan in Barbary, and to be deposited in a stately mosque erected on purpose in the city of Cairo in Egypt. This was a most effectual method to induce his successors to reside in Egypt also, as it soon became an established custom among those khalifs, frequently to pay their respectful visits to the tombs of their ancestors. To establish himself the more effectually in his new dominions, he suppressed the usual prayers made in the mosques for the khalifs of Bagdad, and substituted his own name in their stead. This was complied with, not only in Egypt and Syria, but even throughout all Arabia, the city of Mecca alone excepted. The consequence was, a schism in the Mohammedan faith, which continued upwards of 200 years, and was attended with continual animosities, and sometimes destructive wars between the khalifs of Bagdad and those of Egypt.—Having fully established himself in his kingdom, he died in the 45th year of his age, three years after he had left his dominions in Barbary; and was succeeded by his son Abu Al Mansur Barar, surnamed Aziz Billah.

(15.) EGYPT, HISTORY OF, TILL THE EXTINCTION OF THE RACE OF THE KHALIFS. The new khalif succeeded at the age of 21; and conducted the management of affairs entirely to

the care of Jawhar, his father's long experienced general and prime minister. In 978, he sent this famous warrior to drive out Al Asteikin, the emir of Damascus. The Egyptian general accordingly formed the siege of that place; but at the end of two months, was obliged to raise it, on the approach of an army of Karmatians under the command of Al Hakem. As Jawhar was not strong enough to venture an engagement with these Karmatians, it was impossible for him to hinder them from effecting a junction with the forces of Al Asteikin. He therefore retreated, or rather fled towards Egypt with the utmost expedition; but being overtaken by the two confederate armies, he was soon reduced to the last extremity. He was, however, permitted to refuse his march, on condition that he passed under Al Asteikin's sword and Al Hakem's lance; and to this disgraceful condition Jawhar found himself obliged to submit. On his arrival in Egypt, he immediately advised Al Aziz to undertake an expedition in person into the east, against the combined army of the Turks, Karmatians, and Damascenes, under the command of Al Asteikin and Al Hakem. The khalif followed his advice; and advancing against his enemies, overthrew them with great slaughter. Al Asteikin himself escaped out of the battle; but was afterwards taken and brought to Al Aziz, who made him his chamberlain, and treated him with great kindness. Jawhar, in the mean time, was disgraced on account of his bad success; and in this disgrace he continued till his death, which happened A. D. 990, and in the year of the Hegira 381. This year Al Aziz having received advice of the death of Saadoddawla prince of Aleppo, sent a formidable army under the command of a general named Manjubekin, to reduce that place. Lulu, who had been appointed guardian to Saadoddawla's son, finding himself pressed by the Egyptians, who carried on the siege with great vigour, demanded assistance from the Greek emperor. Accordingly, he ordered a body of troops to advance to Lulu's relief. Manjubekin, being informed of their approach, immediately raised the siege, and advanced to give them battle. An obstinate engagement ensued, in which the Greeks were at last overthrown with great slaughter. After this victory, Manjubekin pushed on the siege of Aleppo very briskly; but finding the place capable of defending itself much longer than he at first imagined, and his provisions beginning to fail, he raised the siege. The khalif upon this sent him a very threatening letter, and commanded him to return before Aleppo. He did so; and continued the siege for 13 months; during all which time it was defended by Lulu with incredible bravery. At last, the Egyptians hearing that a numerous army of Greeks was on their way to relieve the city, they raised the siege, and fled with the utmost precipitation. The Greeks then took, and plundered some of the cities which Al Aziz possessed in Syria; and Manjubekin made the best of his way to Damascus, where he set up for himself. Aziz being informed of this revolt, marched in person against him with a considerable army; but, being taken ill by the way, he expired, in the 21st year of his reign and 42d of his age. Aziz, Billah.

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was succeeded by his son Abu Al Mansur, surnamed Al Hakem; who, being only 11 years of age, was put under the tuition of an eunuch of approved integrity. This reign is remarkable for nothing so much as the madness with which the khalif was seized in the latter part of it. This manifested itself first by his issuing many preposterous edicts; but at length grew to such a height, that he fancied himself a god, and found no fewer than 16,000 persons who owned him as such. These were mostly the Dararians, a new sect sprung up about this time, who were so called from their chief Mohammed Ebn Ishaq surnamed Darari. He is supposed to have inspired the mad khalif with his impious notion; and, as Darari set up for a second Moses, he did not scruple to assert that Al Hakem was the great Creator of the universe! For this reason, a zealous Turk stabbed him in the khalif's chariot. His death was followed by a three days uproar in the city of Cairo; during which Darari's house was pulled down, and many of his followers massacred. The sect, however, did not expire with its author. He left behind him a disciple named Hamza, who, being encouraged by the mad khalif, spread it through his dominions. This was quickly followed by an abrogation of all the Mahomedan fasts, festivals, and pilgrimages, the grand one to Mecca in particular; so that the zealous Mahometans were now greatly alarmed, as justly supposing that Al Hakem designed entirely to suppress the worship of the true God, and introduce his own in its place. From this apprehension, however, they were delivered by the death of the khalif; who was assassinated, by a contrivance of his own sister, A. D. 1020. Al Hakem was succeeded by his son Al Thahir, who reigned 15 years; and left the throne to a son under 7 years of age, named Al Mostanser Billah. In the year 1041, a revolt happened in Syria; but Al Mostanser having sent a powerful army into that country, under the command of one *Amir/tekin*, he not only reduced the rebels, but considerably enlarged the Egyptian dominions in Syria. In 1054, a Turk named Al Bassafiri, having quarrelled with the vizir of Al Kayem khalif of Bagdad, fled to Egypt and put himself under the protection of Al Mostanser. The latter, imagining this would be a favourable opportunity for enlarging his dominions, and perhaps seizing on the city of Bagdad, supplied Bassafiri with money and troops. By this assistance, he was enabled to possess himself of Arabian Irak, and ravage that province to the very gates of Bagdad. On this, Al Kayem wrote to Togrol Beg, or Tangrolipix, the Turkish sultan, to come to his assistance. The sultan immediately complied, and soon after arrived at Bagdad with a formidable army and 18 elephants. Of this Bassafiri gave notice to Al Mostanser, and entreated him to exert himself further for his support against so powerful an enemy. This was accordingly done, but nothing worthy of notice happened till 1058, when Bassafiri having excited Ibrahim the sultan's brother to revolt, Togrol Beg was obliged to employ all his force against him. This gave Bassafiri an opportunity of seizing on the city of Bagdad; and the unfortunate khalif, according to some, was taken prisoner, or, according to others, fled. Bas-

safiri, on his entry, caused Al Mostanser to be immediately proclaimed khalif in all quarters of the city. Al Kayem's vizir he caused to be led on camel through the streets of Bagdad, dressed in a woollen gown, with a high red bonnet, and leathern collar about his neck; a man lashing him all the way behind. Then being sewed up in bull's hide, with the horns placed over his head and hung upon hooks, he was beaten without ceasing till he died. The imperial palace was plundered, and the khalif himself detained a close prisoner. This success was but short-lived; for, in 1056, Togrol Beg defeated his brother Ibrahim, took him prisoner and strangled him. He then marched to Bagdad, which Bassafiri abandoned at his approach. Here the khalif Al Kayem was delivered up by Mahras, the governor of a city called *Hadaba*, who had the charge of him. The khalif was immediately restored to his dignity; which Bassafiri no sooner understood, than he again advanced towards the city. Against him Togrol Beg led a part of his army under some of his general while he himself followed with the rest. A battle ensued, in which the army of Bassafiri was defeated, and he himself killed. His head was brought to Togrol Beg, who caused it to be carried on pike through the streets of Bagdad. Thus the hopes of Al Mostanser were entirely frustrated, and from this period we may date the declining of the Egyptian empire under the khalifs. They had made themselves masters of almost all Syria but no sooner was Bassafiri's bad success known than the younger part of the citizens of Aleppo revolted, and set up Mahmud Azzoddawla, who immediately laid siege to the citadel. Al Mostanser sent a powerful army against him, which Azzoddawla entirely defeated, and took the general himself prisoner; and soon after this, he made himself master both of the city and citadel, with all their dependencies. In his new dominions he behaved with the greatest cruelty, destroying every thing with fire and sword, and making frequent incursions into the neighbouring provinces, which he treated in the same manner. This disaster was soon followed by others still more terrible. In 1066, a famine raged over all Egypt and Syria with such fury, that dogs and cats were sold for 4 or 5 Egyptian dinars each, and other provisions in proportion. Multitudes of people died in Cairo for want of food. Nay, so great was the famine, that the vizir had but one servant left who was able to attend him to the khalif's palace, and to whom he gave the care of his horse when he alighted at the gate. But, at his return, he was surprised to find that the horse had been carried off, killed, and eaten by the famished people. Of this he complained to the khalif; who caused three of them who had carried off the horse to be hanged. Next day, however, he was still more surprised to hear, that all the flesh had been picked off the bones of the three unhappy criminals, to such a degree of misery were the inhabitants, not only in Cairo but through all Egypt, reduced, that the carcases of those who died were sold for food at a great price, instead of being buried. All this time the khalif showed the greatest kindness and beneficence towards his unhappy subjects.

in which that of 10,000 horses, mules and camels, which he had in his stables when the famine began, he had only 3 left when it was removed. The famine was followed by a plague; and this by an invasion of the Turks under Abu Ali Al Hassan Baseroddawla, the very general who had been sent against the rebel Azzoddawla and defeated by him. He began with besieging the khalif in his own palace; and the unhappy prince being in no condition to make resistance, was obliged to buy himself off at the expence of every thing valuable that was left in his exhausted capital and treasury. This, however, did not hinder these merciless plunderers from ravaging all the Lower Egypt from Cairo to Alexandria, and committing the most horrid cruelties through that whole tract. This happened in 1067 and 1068; and in 1069 and 1070, there happened two other revolts in Syria: so that this country was now almost entirely lost. In 1095 died the khalif Al Mostanser, having reigned 60 years; and was succeeded by his son Abul Kafem, surnamed Al Mostali.—The most remarkable transaction of this prince's reign, was his taking the city of Jerusalem from the Turks in 1098: but this success was only of short duration; for it was, the same year taken by the crusaders. From this time to 1164, the Egyptian history affords little else than an account of the intestine broils and contests between the vizirs, who were now become so powerful, that they had in a great measure stripped the khalifs of their civil power, and left them nothing but a shadow of royal dignity. These contests at last gave occasion to a revolution, by which the race of Fatemite khalifs was totally extinguished. This revolution was accomplished in the following manner: One SHAWER, having overcome all his competitors, became vizir to Al Aded, the 11th khalif of Egypt. He had not been long in possession of this office, when Al Dargam, an officer of rank, endeavoured to deprive him of it. Both parties equally had recourse to arms; and a battle ensued, in which Shawer was defeated, and obliged to fly to Nuroddin prince of Syria, by whom he was graciously received, and who promised to restore him in his office of vizir. As an inducement to Nuroddin to assist him more powerfully, Shawer told him that the crusaders had landed in Egypt, and made a considerable progress in the conquest of it. He promised also, that, in case he was reinstated in his office, he would pay Nuroddin annually the 3d part of the revenues of Egypt; and would, besides, defray the whole expence of the expedition. As Nuroddin bore an implacable hatred to the Christians, he readily undertook an expedition against them, for which he was to be so well paid. He therefore sent an army into Egypt, under the command of Shawer and a general named Afadoddin. Dargam, in the mean time, had cut off so many generals whom he imagined favourable to Shawer's interest, that he thereby weakened the military force of the kingdom, and in a great measure deprived himself of the power of resistance. He was therefore easily overthrown by Afadoddin, and Shawer re-instated in the office of vizir. The faithless minister, however, no sooner saw himself firmly established in his office, than he refused to fulfil his

engagements to Nuroddin by paying the stipulated sums. Upon this, Afadoddin seized Pelusium and some other cities. Shawer then entered into an alliance with the crusaders, and Afadoddin was besieged by their combined forces in Pelusium. Nuroddin, however, having invaded the Christian dominions in Syria, and taken a strong fortress, called *Harem*, Shawer and his confederates thought proper to hearken to some terms of accommodation, and Afadoddin was permitted to depart for Syria. In the mean time, Nuroddin, having subdued the greatest part of Syria and Mesopotamia, resolved to make Shawer feel the weight of his resentment, on account of his perfidious conduct. He therefore sent back Afadoddin into Egypt with a sufficient force, to compel Shawer to fulfil his engagements: but this the vizir took care to do before the arrival of Afadoddin; and thus, for the present, avoided the danger. It was not long, however, before he gave Nuroddin fresh occasion to send this general against him. That prince had now driven the crusaders almost entirely out of Syria, but was greatly alarmed at their progress in Egypt; and consequently offended at the alliance which Shawer had concluded with them, and which he still persisted in observing. This treaty was also thought to be contrived on purpose to prevent Shawer from being able to fulfil his promise to Nuroddin, of sending him annually a third of the revenues of Egypt. Nuroddin therefore again dispatched Afadoddin into Egypt, in 1166, with a sufficient force, and attended by the famous Saladin, his own nephew. They entered the kingdom without opposition, and totally defeated Shawer and the crusaders. They next made themselves masters of Alexandria; and, after that, over-ran all the Upper Egypt. Saladin was left with a considerable garrison in Alexandria; but Afadoddin was no sooner gone, than the crusaders laid siege to that city. This at last obliged Afadoddin to return to its relief. The great losses he had sustained in this expedition probably occasioned his agreeing to a treaty with Shawer, by which he engaged to retire out of Egypt, upon being paid a sum of money. Afadoddin was no sooner gone, than Shawer entered into a fresh treaty with the Franks. By this new alliance he was to attack Nuroddin in his own dominions, as he was at that time engaged in quelling some revolters, which would effectually prevent his sending any more forces into Egypt. This treaty so provoked the Syrian prince, that he resolved to suspend his other conquests for some time, and exert his whole strength in the conquest of Egypt. By this time the crusaders had reduced Pelusium, and made a considerable progress in the kingdom, as well as in some other countries, through the divisions which reigned among the Mahometan princes. In such places as they conquered, they put many to the sword, Christians as well as Mahometans; selling the rest for slaves, and giving up the towns to be plundered by the soldiers. From Pelusium they marched to Cairo; which was then in no posture of defence, but in the utmost confusion, by reason of the divisions which reigned in it. Shawer, therefore, as soon as he had heard of their approach, called the ancient quarter called *Mejra*

to be set on fire, and the inhabitants to retire into other parts. He also prevailed upon the khalif to solicit the assistance of Nuroddin; which the latter was indeed much inclined to grant, as it gave him the fairest opportunity both of driving the crusaders out of Egypt, and of seizing the kingdom to himself. For this purpose he had already raised an army of 60,000 horse under his general Asadoddin; and, on the receipt of Al Aded's message, gave them orders to set out immediately. The crusaders were now arrived at Cairo; and had so closely besieged that place, that neither Shamer nor the khalif knew any thing of the approach of the Moslem army, which was hastening to their relief. The vizir, therefore, finding it impossible to hold out long against the enemy, had recourse to his old subterfuge of treaties and high promises. He sent the enemy 100,000 dinars, and promised them 900,000 more, if they would raise the siege; which they, dreading the approach of Asadoddin, very readily accepted. The army of Nuroddin now approached the capital by hasty marches, and were every where received with the greatest demonstrations of joy. Asadoddin, on his arrival at Cairo, was invited by Al Aden to the royal palace, where he, with Saladin and the other principal officers were most magnificently treated. Shamer was no less assiduous in attending punctually upon them. But having invited the general and some others to an entertainment, he had formed a scheme of having them seized and murdered. The plot, however, being discovered, Shamer's head was cut off, and Asadoddin was made vizir in his stead. He died however, two months and five days after his instalment, and was succeeded by his nephew Saladin. The new vizir was the youngest of all the grandees who aspired to that office, but had already given some signal proofs of his valour. Some of his rivals were highly displeased with his promotion, and even publicly declared that they would not obey him. To gain these to his interest, therefore, Saladin distributed among them part of the vast treasures left by his uncle; by which means he soon governed Egypt without controul. Soon after his being installed into office, he totally defeated the negroes who guarded the royal palace, and had opposed his election; by which means, and by placing a strong garrison in the castle of Cairo, his power became firmly established. Though he had no intention of continuing in his allegiance to Nuroddin, he did not think it prudent at first to declare himself. He sent for his father, however, and the rest of his family, who were in Nuroddin's dominions, in order, as he said, to make them partakers of his grandeur and happiness. Nuroddin did not think proper to deny this request; though, being already jealous of the great power of Saladin, he insisted that his family should consider him only as one of his generals in Egypt. A good understanding subsisted between Nuroddin and Saladin for some time, which contributed to raise the credit of the latter with the Egyptians. In 1169, Nuroddin sent him orders to omit the name of Al Aded, the khalif of Egypt, in the public prayers, and substitute that of the khalif of Bagdad in its place. This was a dangerous attempt; as it might have produced a

revolt in favour of Al Aded; and at any rate gave Saladin an opportunity of engrossing that small remnant of power, which was left the khalif. Al Aded, however, was not sensible of his disgrace: for he was on his death-bed, past recovery, when Nuroddin's orders were executed. After his death, Saladin seized on all wealth and valuable effects; which consisted of jewels of prodigious size, sumptuous furniture, a library containing 100,000 volumes, &c. His family he caused to be closely confined in the private and retired place of the palace; and dismissed his slaves, or kept them for himself.

(18.) EGYPT, HISTORY OF, UNDER SALADIN AND HIS SUCCESSORS. Saladin was now at the highest pitch of wealth, power, and grandeur. He was, however, obliged to behave with great circumspection with regard to Nuroddin, who still continued to treat him as his vassal, and would not suffer him to dispute the least of his commands. He relied for advice chiefly on his father Ayub, who was a consummate politician and very ambitious of seeing his son raised to the throne of Egypt. He therefore advised Saladin whilst he amused Nuroddin with feigned submissions, to take every method to secure himself the possession of so valuable a kingdom. Nuroddin himself, however, was too great a master of dissimulation to be easily imposed on by others, and therefore, though he pretended to be pleased with Saladin's conduct, he was all the time raising a powerful army, with which he was fully determined to invade Egypt the following year. But while he meditated this expedition, he was seized with a quinsey at the castle of Damascus, which put an end to his life in 1173. Saladin, though now freed from the apprehensions of such a formidable enemy, did not venture to assume the title of *Sovereign*, while he saw the successor of Nuroddin at the head of a very powerful army. His first care therefore was to seek to himself an asylum, in case he should be obliged to leave Egypt altogether. For this purpose he chose the kingdom of Nubia; but having dispatched his brother Malek Turanah thither, the head of a considerable army, the latter was much struck with the sterility and desolate appearance of the country, that he returned without attempting any thing. Saladin then sent his brother into Arabia Felix, to subdue that country, which had been for some time held by Abdalnabi, an Arabian prince. Malek entered the country without opposition; and having brought Abdalnabi to a general action, entirely defeated him, took him prisoner, and threw him into irons. He then over-ran and reduced under subjection to Saladin a great part of the country, taking no fewer than 80 castles of considerable strength. Saladin, in pursuance of a convenient place of refuge, assumed the title of *Sultan* of Egypt; and was acknowledged as such by the greater part of the state. The zeal of the Egyptians for the Fatemite khalifs, however, soon produced a rebellion. One *Al Kanaw* or *Kanzanaddowla*, governor of a city in Upper Egypt, assembled a great army of blacks, or of their swarthy natives; and marching into the lower country, was there joined by great numbers of other Egyptians. Against them Saladin dispatched

ed his brother Malek, who soon entirely dispersed them. This, however, did not prevent another expedition under an impostor, who pretended to be David the son of Al Aden, and had collected a body of 100,000 men. But before these had time to do any great damage, they were surprised by the Sultan's forces, and entirely defeated. Above 20,000 were publicly hanged; and a vast number perished in the field, inasmuch that it was thought scarce a fourth part of the whole body escaped. About this time Saladin gained a considerable advantage over the crusaders, commanded by William II. king of Sicily. That prince had invaded Egypt with a numerous fleet and army, with which he laid close siege to Alexandria by sea and land. Saladin, however, marched to the relief of the city with such expedition, that the crusaders were seized with a sudden panic, and fled with the utmost precipitation, leaving all their engines, stores, and baggage behind. In consequence, the inhabitants of Damascus begged of Saladin to accept the sovereignty of that city and its dependencies; being jealous of the minister, who bore the tuition of the reigning prince, and who reigned with an absolute sway. The sultan set forth with the utmost celerity to Damascus, at the head of a chosen detachment of 700 horse. Having settled his affairs in that city, he appointed another Saif Al Islam governor of it; and set out for Hama, to which he immediately laid siege. Being made himself master of this place, he then proceeded to Hamah, which soon surrendered, the citadel held out for some time. Saladin intended that he accepted the sovereignty of Damascus and the other places he had conquered, by a deputy to Al Malek Al Saleh, the successor of Nuroddin, and who was then under age; and he was desirous of sending Azzuddin, who resided in the citadel, with a letter to Aleppo, or the young prince resided. This so pleased Azzuddin, that he took the oath of fidelity to Saladin, and immediately set out with his letter. He had, however, been long at Aleppo before he obeyed the minister's orders thrown into prison; in which his brother, who had been appointed governor of the citadel of Hamah in his absence, forced it up to Saladin. The sultan then marched to Aleppo, but, being vigorously repulsed in his attacks, he was at last obliged to abandon the enterprise. At the same time, Kamschlegin, the Sultan's minister or vizir, hired the chief of the Assassins, to murder him; but the attempt made in consequence miscarried. See Appendix, § 2. After raising the siege of Aleppo, Saladin returned to Hama, which the crusaders had evacuated. On his approach, however, they fled; after which, the sultan made himself master of its strong castle. This was soon followed by the reduction of Balbec; and these rapid conquests alarmed the ministers of Al Malek, that, in conjunction with some of the neighbouring princes, they raised a formidable army, with which they designed to crush the sultan at Hama. Saladin, fearing the event, offered to cede Hamah and Hamah to Al Malek, and to govern Damascus only as his lieutenant; but these terms were rejected, a battle ensued; in which the army was utterly defeated, and the shattered

remains of it shut up in Aleppo. This produced a treaty, by which Saladin was left master of all Syria, excepting only the city of Aleppo and its territory. In 1176, Saladin returned from the conquest of Syria, and made his triumphal entry into Cairo. Here, having rested himself and his troops for some time, he began to encompass the city with a wall 29,000 cubits in length, but which he did not live to finish. Next year he led a very numerous army into Palestine against the crusaders. But here his usual good fortune failed him. His army was entirely defeated; 40,000 of his men were left dead on the field; and the rest fled with so much precipitation, that, having no towns in the neighbourhood where they could shelter themselves, they traversed the vast desert between Palestine and Egypt, and scarce stopped till they reached the capital itself. Thus the greatest part of the army perished; and as no water was to be had in the desert, almost all the cattle died of thirst before the fugitives arrived on the confines of Egypt. Saladin himself seemed to have been greatly intimidated; for in a letter to his brother Al Malek, he told him, that "he was more than once in the most imminent danger; and that God, as he apprehended, had delivered him, to reserve him for the execution of some grand and important design." In 1182, he set out on an expedition to Syria with a formidable army, amidst the acclamations and good wishes of the people. He was, however, repulsed with loss both before Aleppo and Al Mawfel, after having spent much time and labour in besieging these two important places. In the mean time, a most powerful fleet of European ships appeared on the Red Sea, which threatened the cities of Mecca and Medina with the utmost danger. The news of this armament no sooner reached Cairo, than Abu Beccr, Saladin's brother, who had been left viceroy, caused another to be fitted out with all speed under the command of Lulu, a brave and experienced officer; who quickly came up with them, and a dreadful engagement ensued. The Christians were defeated after an obstinate resistance, and all the prisoners butchered in cold blood. This proved such a terrible blow to the Europeans, that they never more ventured on a like attempt. In 1183, Saladin continued to extend his conquests. The city of Amidah in Mesopotamia surrendered to him in 8 days; after which, being provoked by some violence committed by Amadoddin, prince of Aleppo, he resolved to make himself master of that place. His army being now very numerous, he pushed on the siege with the utmost vigour; whereupon Amadoddin capitulated, upon condition of being allowed to possess certain cities in Mesopotamia, which had formerly belonged to him, and being ready to attend the sultan on whatever expedition he pleased. After the conquest of Aleppo, Saladin took three other cities, and then marched against the crusaders. Having sent out a party to reconnoitre, they fell in with a considerable detachment of Christians, whom they easily defeated, taking about 200 prisoners, with the loss of only a single man on their side. The sultan, animated by this first instance of success, advanced against the crusaders, who had assembled their whole army at Sepphoris in Galilee. On

viewing the sultan's troops, however, and perceiving them to be greatly superior in strength to what they had at first apprehended, they declined an engagement, nor could Saladin with all his skill force them to it. But though he found it impossible to bring the crusaders to a decisive engagement, he harassed them greatly, and destroyed great numbers of their men. He also carried off many prisoners, dismantled 3 of their strongest cities, laid waste their territories, and concluded the campaign with taking another strong town. For three years Saladin continued to gain ground on the crusaders, yet without any decisive advantage; till 1187, when the Christians found themselves obliged to venture a battle, by reason of the cruel ravages committed in their territories. Both armies therefore being resolved to exert their utmost efforts, a most fierce and bloody battle ensued. Night prevented victory from declaring on either side, and the fight was renewed with equal obstinacy next day. The victory was still left undecided; but on the 3d day Saladin's troops, finding themselves surrounded by the enemy on all sides but one, and there also hemmed in by the river Jordan, so that there was no room to fly, fought like men in despair, and at last gained a most complete victory. Vast numbers of the Christians perished on the field. A large body retired to the top of a neighbouring hill covered with wood; but being surrounded by Saladin's troops, who set fire to the wood, they were all obliged to surrender at discretion. Some of them were butchered by their enemies, as soon as they delivered themselves into their hands, and others thrown into irons. Among the latter were the king of Jerusalem himself, Arnold prince of Al Shawbec and Al Carac, the masters of the Templars and Hospitallers, with almost the whole body of the latter. So great was the consternation of the Christians on this occasion, that one of Saladin's men is said to have taken 30 of them prisoners, and tied them together with the cord of his tent, to prevent them from making their escape. The masters of the Templars and Hospitallers, with the knights acting under them, were no sooner brought into Saladin's presence, than he ordered them all to be cut in pieces. After the engagement, Saladin seated himself in a magnificent tent, placing the king of Jerusalem on his right hand, and Arnold prince of Al Shawbec and Al Carac on his left. Then he drank to the former, and at the same time offered him a cup of snow water. This was thankfully received; and the king immediately drank to the prince of Al Carac, who sat near him. "I will not, said Saladin, suffer this cursed rogue to drink; as that, according to the laudable and generous custom of the Arabs, would secure to him his life." Then turning towards the prince, he reproached him with having undertaken the expedition while in alliance with himself, with having intercepted an Egyptian caravan in the time of profound peace, and massacring the people of which it was composed, &c. Notwithstanding all this, he told him, he would grant him his life, if he would embrace Mahometanism. This condition, however, was refused; and the sultan, with one stroke of his scimeter, cut off the prince's head. This terri-

fied the king of Jerusalem; but Saladin affixed him he had nothing to fear, and that Arnold brought on himself a violent death by his own common honesty. The crusaders being thus totally defeated and dispersed, Saladin next besieged Tiberias, which soon capitulated, as also Acca or Ptolemais; where he found 4000 hometan prisoners in chains, whom he immediately released. As the inhabitants of Acca carried a very extensive trade, he found there not vast sums of money, but likewise a great quantity of valuable wares, all of which he seized. At the same time his brother Al Malec attacked and took a very strong fortress in the neighbourhood after which Saladin divided his army into two bodies, and soon made himself master of Nablus, Caesarea, Sepphoris, and other cities in the neighbourhood of Ptolemais, where he found only women and children, the men having been all killed or taken prisoners. His next conquest was Joppa, which was taken by storm, after a vigorous resistance. Every thing being thus subdued, and a distribution made of the spoils and captives, Saladin marched in person against Tyre, a strong fortress in the neighbourhood of which he took by assault, after a siege of 40 days, and ordered the fortress to be razed, and the garrison put to the sword. From Tyre he proceeded to Sidon, which, being deserted by the prince, surrendered almost on the first day. Berytus was next invested, and surrendered in 10 days. Among the prisoners Saladin found the prince of a territory called Hobeil, by way of ransom delivered up his dominions to him, and was of consequence released. At the same time, a Christian ship, in which was a man of great courage and experience in war, arrived at the harbour of Ptolemais, not knowing that it was in the hands of Saladin. They nor might easily have secured the vessel; neglecting the opportunity, she escaped to Cyprus, where the above mentioned nobleman, with the prince of Hobeil, contributed not only to retrieve the affairs of the Christians, and enabled them to make a stand for 4 years longer. In the mean time went on with his conquests. Having made himself master of Acalat, after a siege of 14 days, he next invested Jerusalem, the garrison was numerous, and made an obstinate defence; but Saladin having at last made a breach in the walls by sapping, the besieged desired to capitulate. This was at first refused; upon which the Christian ambassador made the following speech: "If that be the case, know, O sultan, that we who are extremely numerous, and have been restrained from fighting like men in despair, the hopes of an honourable capitulation, and all our wives and children, commit all our goods and valuable effects to flames, massacre our prisoners now in our hands, leave not a finger of burden or animal of any kind belonging to us alive, and level with the ground the rock of the temple, together with the temple itself. After this we will fall upon you in a moment, and doubt not but we shall either cut to pieces much greater number of you than we are, or you to abandon the siege." This desperate speech had such an effect upon Saladin, that he im-

ally called a council of war, at which all the general officers declared, that it would be most proper to allow the Christians to depart unmolested. The sultan therefore allowed them to march out freely with their wives, children, and all their effects; after which he received ten dinars from every man who was capable of paying that sum, five from every woman, and two from every young person under age. For the poor who were not able to pay any thing, the rest of the inhabitants raised the sum of 30,000 dinars. Most of the inhabitants of Jerusalem were escorted by a detachment of Saladin's troops to Tyre; and soon after he advanced with his army against that place. The port was blocked up by a squadron of five hundred war, Saladin imagined that he should easily become master of it. But in this he found himself mistaken. For, one morning by break of day, a Danish fleet fell upon his squadron, and entirely defeated it; nor did a single vessel escape their pursuit. A considerable number of the Mahometans threw themselves into the sea during the engagement; most of whom were drowned, though a few escaped. About the same time Saladin was vigorously repulsed by land; so that, calling a council of war, it was thought proper to raise the siege. In 1188, Saladin reduced the city of Laodicea and some others, together with many strong castles; but met also with several reverses. At last he took the road to Antioch; and having reduced all the fortresses that lay in his way, many of which had been deemed impregnable, Bohemond prince of Antioch was so much intimidated, that he desiring a truce for 7 or 8 months. This Saladin found himself obliged to comply with, on account of the prodigious fatigues his men had sustained, and because his auxiliaries now demanded leave to return home. All these losses of the Christians, however, proved in the end respects an advantage, as they were thus obliged to lay aside their animosities, which had originally proved the ruin of their affairs. Those who had defended Jerusalem, and most of the other fortresses taken by Saladin, having retreated to Tyre, formed there a very numerous body. This proved the means of preserving that city, and also of re-establishing their affairs for the present. For, having received powerful succours from Europe, they were enabled, in 1189, to take the field with 30,000 foot and 2000 horse. Their first attempt was upon Alexandretta; from whence they dislodged a strong party of Mahometans, and made themselves masters of the place with very little loss. They next laid siege to Ptolemais; of which Saladin had no sooner received intelligence, than he marched to its relief. After several skirmishes with various success, a general engagement ensued, in which Saladin was defeated with the loss of 10,000 men. This enabled the Christians to carry on the siege of Ptolemais with greater vigour; which place, however, they were not able to reduce for two years. This year the sultan was greatly alarmed, by an account that the emperor of Germany was advancing to Constantinople with an army of 260,000 men, to assist the other crusaders. This prodigious armament, however, came to nothing. The multitude was so reduced with sickness, famine, and fatigue, that

scarce 1000 of them reached the camp before Ptolemais. The siege of that city was continued, though with bad success on the part of the Christians. They were repulsed in all their attacks, their engines were burnt with naphtha, and the besieged always received supplies of provisions in spite of the utmost efforts of the besiegers; while a dreadful famine and pestilence raged in the Christian camp, which sometimes carried off 400 people a day. In 1191, the Christians received powerful succours from Europe. Philip II. of France, and Richard I. of England, arrived before the camp at Ptolemais. The latter was esteemed the bravest and most enterprising of all the generals the crusaders had; and the spirits of his soldiers were greatly elated by the thoughts of acting under such an experienced commander. Soon after his arrival, the English sunk a Mahometan ship of vast size, having on board 650 soldiers, and a great quantity of arms and provisions, going from Berytus to Ptolemais. Of the soldiers and sailors who navigate this vessel, only one person escaped; who, being taken prisoner by the English, was dispatched to the sultan with the news of the disaster. The besieged still defended themselves with the greatest resolution; and the king of England happening to fall sick, the operations of the besiegers were considerably delayed. On his recovery, however, the attacks were renewed with such fury, that the inhabitants, found themselves under a necessity of surrendering the place. One of the terms of the capitulation was, that the crusaders should receive a very considerable sum of money from Saladin, upon delivering up their Mahometan prisoners. This article Saladin refused to comply with; in consequence of which, Richard caused 3000 of those unfortunate men to be slaughtered at once. After the reduction of Ptolemais, the king of England, now made generalissimo of the crusaders, took the road to Ascalon, in order to besiege that place; after which, he intended to make an attempt upon Jerusalem itself. Saladin, to intercept his passage, placed himself in the way with an army of 300,000 men. On this occasion was fought one of the greatest battles of that age, Saladin was totally defeated, with the loss of 40,000 men; and Ascalon soon fell into the hands of the crusaders. Other sieges were afterwards carried on with success, and Richard even approached within sight of Jerusalem, in 1192, when, by the weakened state of his army, and the divisions among the officers, he was under the necessity of concluding a truce with the sultan. The term was, 3 years, 3 months, 3 weeks, 3 days, and 3 hours; soon after which Richard set out on his return to England. In 1193, Saladin died, to the inexpressible grief of the Mahometans, who held him in the utmost veneration. His dominions in Syria and Palestine were divided among his children and relations into many petty principalities. His son Othman succeeded to the crown of Egypt; but as none of his successors possessed the enterprising genius of Saladin, the history from that time to 1250 affords nothing remarkable.

(19.) EGYPT, HISTORY OF, UNDER THE MAMLUKS. In 1250, the reigning sultan Malek Al S. lek was dethroned and slain by the Mamelukes or Mamlouks,

Mamlouks, as they are called, a kind of mercenary soldiers who served under him. In consequence of this revolution, the *Mamlouks* became masters of Egypt, and chose a sultan from among themselves. These *Mamlouks* were young Turks or Tartars, sold to private persons by the merchants, from whom they were bought by the sultan, educated at his expence, and employed to defend the maritime places of the kingdom. The reason of this institution originally was, that the native Egyptians were become so cowardly, treacherous, and effeminate, from a long course of slavery, that they were unfit for arms. The *Mamlouks*, on the contrary, made most excellent soldiers; for having no friends but among their own corps, they turned all their thoughts to their own profession. According to M. Volney, they came originally from Mount Caucasus, and were distinguished by the flaxen colour of their hair. The expedition of the Tartars, in 1227, proved indirectly the means of introducing them into Egypt. These horrible conquerors, having slaughtered and massacred till they were weary, brought along with them an immense number of slaves of both sexes, with whom they filled all the markets in Asia. The Turks purchased about 12,000 young men, whom they bred up in the profession of arms, in which they soon attained to great perfection; but at last becoming mutinous, they turned their arms against their masters, and in 1250, deposed and murdered the sultan, Malek. The *Mamlouks* having thus got possession of the government, and neither understanding nor valuing any thing but the art of war, every species of learning decayed in Egypt, and a great degree of barbarism was introduced. Neither was their empire of long duration, notwithstanding their martial abilities. The reason was, that they were originally only a small part of the sultan of Egypt's standing forces. As a numerous standing army was necessary in a country where the fundamental maxim of government was, that every native must be a slave, they were at a loss how to act; being justly suspicious of all the rest of the army. At last they resolved to buy Christian slaves, and educate them in the same way that they themselves had formerly been. These were commonly brought from Circassia, where the people, though they professed Christianity, made no scruple of selling their children. When they were completed in their military education, these soldiers were disposed of through all the fortresses erected in the country to bridle the inhabitants; and because in their language such a fort was called *Borge*, the new militia obtained the name of *Borgites*. By this expedient the *Mamlouks* imagined they would be able to secure themselves in the sovereignty, but they were mistaken. In process of time, the old *Mamlouks* grew proud, indolent, and lazy; and the *Borgites*, taking advantage of this, rose upon their masters, deprived them of the government, and transferred it to themselves about A. D. 1382. The *Borgites*, however, assumed the name of *Mamlouks*; and became famous for ferocious valour. They were almost perpetually engaged in wars either foreign or domestic; and their dominion lasted till 1517, when they were invaded by Selim I, the Turkish sultan. The *Mamlouks* defended themselves with

incredible valour; notwithstanding which, being overpowered by numbers, they were defeated in every engagement. The same year, their capital the city of Cairo, was taken, and a terrible slaughter made of those who defended it. The sultan Tuman Bey was forced to fly; and, having collected all his forces, he ventured a decisive battle. The most romantic efforts of valour, however, were insufficient to cope with the immense multitude which composed the Turkish army. Most of his men were cut in pieces, and unhappy prince himself was at last obliged to take shelter in a marsh. He was dragged to his hiding place, where he had stood up to his shoulders in water, and soon after put to death. With him ended the glory, and almost the existence, of the *Mamlouks*, who were now everywhere searched for and cut in pieces.

(20.) EGYPT, HISTORY OF, UNDER THE TURKS. Selim gave a specimen of his government every day after his being put in full possession of it by the death of Tuman Bey. He ordered a theatre to be erected with a throne upon it, on the banks of the Nile, he caused prisoners, upwards of 30,000, to be beheld in his presence, and their bodies thrown into the river. Notwithstanding this horrid barbarity, Selim did not attempt the total extermination of the *Mamlouks*, but seems to have recollected, that he established a pacha in Egypt with the powers with which he invested those of other parts, he would be under strong temptation to revolt, by reason of the distance from the capital. He therefore proposed a new form of government by which the power, being distributed among different members of the state, should preserve equilibrium; so that the dependence of the pacha should be upon himself. With this view, he chose from among those *Mamlouks* who had escaped the general massacre, a divan, or council of regency, consisting of the pacha and chiefs of the military corps. The former was to notify to the council the orders of the Porte, to send the pacha to Constantinople, and provide for the safety of the government both external and internal; while on the other hand, the members of the council had a right to reject the orders of the pacha, or of deposing him, provided they could assign sufficient reasons. All civil and political ordinances must also be ratified by them. Besides this, he formed the whole body into a kind of republic for which purpose he issued an edict to the following purpose: "Though, by the help of Almighty, we have conquered the whole kingdom of Egypt with our invincible armies; nevertheless our benevolence is willing to grant to the 24 pashas of Egypt (see SANGIAC) a republican government, with the following conditions. I. That sovereignty shall be acknowledged by the republic; and in token of their obedience, our lieutenant shall be received as our representative, but do nothing against our will or the republic; II. On the contrary, shall co-operate with it for the welfare on all occasions: Or, if he shall attempt to infringe any of its privileges, the republic is at liberty to suspend him from his authority, and send to our Sublime Porte a complaint against him, &c. II. In time of war, the republic shall

guide 12,000 troops at its own expence, to be commanded by a sangiac or sangiacs. III. The republic shall raise annually and send to our Sublime Porte the sum of 560,000 aslans, (see ASLAN,) accompanied by a sangiac, who shall have a satisfactory receipt, &c. IV. The same sum to be paid for the use of Medina, and Kiabe or Mecca. V. No more troops or janizaries shall be kept by the republic in time of peace than 14,000; but in time of war they may be increased to oppose our and the republic's enemies. VI. The republic shall send annually to our granary, out of the produce of the country, one million of caliz (25 occas, or occas,) or measures of corn, viz. 600,000 of wheat, and 400,000 of barley. VII. The republic, fulfilling these articles, shall have a free government over all the inhabitants of Egypt, independent of our lieutenant; but shall execute the laws of the country with the advice of the mollah, high priest, under our authority, and that of our successors. VIII. The republic shall be in possession of the mint as heretofore; but with this condition, that it shall be under the inspection of our lieutenant, that the coin may not be adulterated. IX. That the republic shall elect a *sheik* out of the number of beys, to be confirmed by our lieutenant; and that the said sheik bellet shall be our representative, and shall be esteemed as our lieutenants, and all our officers both of high and low rank, as the head of the republic; and if our lieutenant is guilty of oppression, or exceeds the bounds of his authority, the said sheik shall represent the grievances of the republic to our Sublime Porte: But in case any foreign enemy or enemies disturb the peace of the republic, and our successors engage to protect it with our utmost power, until peace is re-established, without any cost or expence to the republic. X. And signed by our *clemency* to the republic of Egypt." Thus the power of the Mamlouks continued in a very considerable degree, and actually increased so much as to threaten a total loss of dominion to the Turks. During the last years, the Porte having relaxed from its vigilance, such a revolution took place, that the Turkish power is now almost reduced to nothing. But to understand this, we must consider the way in which the race of Mamlouks is continued or multiplied in Egypt. This is not in the ordinary way, by marriage: on the contrary, M. Volney tells us, that "during 550 years in which there have been Mamlouks in Egypt; not one of them has left subsisting issue; all their children perish at the first or second descent. Almost the same may be said with regard to the Turks; and it is observed, that they can only secure the continuance of their families by marrying women who are natives, which the Mamlouks have always disdain'd. The means by which they are perpetuated and multiplied are the same by which they were first established, viz. by slaves brought from their original country. From the time of the Moguls this commerce has been continued on the banks of the Cuban and Phasis, in the same manner as it is carried on in Africa, by the wars among the hostile tribes, and the misery or avarice of the inhabitants, who sell their children to strangers. The slaves thus procured are first brought to

Constantinople, and afterwards dispersed through the empire, where they are purchased by the wealthy. When the Turks subdued Egypt (says M. Volney,) they should undoubtedly have prohibited this dangerous traffic; their omitting which seems about to dispossess them of their conquest, and which several political errors have long been preparing. For a considerable time the Porte had neglected the affairs of this province; and in order to restrain the pachas, had suffered the divan to extend its power till the chiefs of the janizaries and azabs were left without control. The soldiers themselves, become citizens by the marriages they had contracted, were no longer the creatures of Constantinople; and a change introduced into their discipline still more increased these disorders. At first the 7 military corps had one common treasury; and though the society was rich, individuals, not having any thing at their own disposal, could effect nothing. The chiefs, finding their power diminished by this regulation, got it abolished, and obtained permission to possess distinct property, lands, and villages. And as these lands and villages depended on the Mamlouk governors, it was necessary to conciliate them to prevent their oppressions. From that moment the beys acquired an ascendancy over the soldiers, who till then had treated them with disdain; and this continually increased, as their governments procured them considerable riches. These they employed in creating friends. They multiplied their slaves; and after emancipating them, employed all their interest to advance them in the army. These upstarts, retaining for their patrons the same superstitious veneration common in the East, formed factions implicitly devoted to their pleasure." Thus, about 1746, Ibrahim, one of the kiasyas of the janizaries, (see KIASYA) rendered himself in reality master of Egypt; having managed matters so well, that of the 24 beys or sangiacs 8 were of his household. His influence too was augmented by always leaving vacancies, in order to enjoy the emoluments himself, while the officers and soldiers of his corps were attached to his interest; and his power was completed by gaining over Rodoon, the most powerful of all the colonels, to his interest. Thus the pacha became altogether unable to oppose him, and the orders of the sultan were less respected than those of Ibrahim. On his death in 1757, his family, i. e. his enfranchised slaves, continued to rule in a despotic manner. Waging war, however, among each other, Rodoon and several other chiefs were killed; but in 1766, Ali Bey, who had been a principal actor in the disturbances, overcame his enemies, and for some time rendered himself absolute master of Egypt. Of this man there are various accounts. The following is given by M. Volney. It is supposed that Ali was born among the Abazans, a people of Mount Caucasus; from whom, next to the Circassians, the slaves most valued by the Turks are obtained. Having been brought to a public sale at Cairo, Ali was bought by two Jew brothers, named Isaac and Yousef, who made a present of him to Ibrahim. At this time he is supposed to have been about 13 or 14 years old, and was employed by his patron in offices similar to those of the pages belonging to European princes. The usual edu-

cation was also given him; viz. that of learning to manage a horse well; fire a carbine and pistol; and throw the djerid, a kind of dart used in the diversions of that country. He was also taught the exercise of the fabre, and a little reading and writing. In all these tests of activity he discovered such impetuosity, that he obtained the surname of *Djendali*, or the *madman*; and, as he grew up, discovered an ambition proportionable to the activity displayed in his youth. About the age of 18 or 20 Ibrahim gave him his freedom; the badge of which among the Turks is letting the beard grow, for among that people it is thought proper only for women and slaves to want a beard. By his kind patron also he was promoted to the rank of kachef, or governor of a district, and at last elected one of the 24 beys. By the death of Ibrahim in 1757, he had an opportunity of satisfying his ambition: being now engaged in every scheme for the promotion or disgrace of the chiefs, and having had a principal share in the ruin of Rodoan. Rodoan's place was quickly filled by another, who did not long enjoy it; and in 1762 Ali Bey, then styled *Sbaik el Beled*, having got Abdelrahman, the possessor, exiled, procured himself to be elected in his room. However, he soon shared the fate of the rest, being condemned to retire to Gaza. This place, being under the dominion of a Turkish pacha, was by no means agreeable; for which reason Ali having turned off to another place, kept himself concealed for some time, until in 1766 his friends at Cairo procured his recall. On this he appeared suddenly in that city; and in one night killed four of the beys who were inimical to his designs, banished the rest, and assumed the whole power to himself. Still, however, his ambition was not satisfied; and he determined to throw off his dependence on the Porte altogether, and become sultan of Egypt. With this view he expelled the pacha, refused to pay the accustomed tribute, and in 1768 proceeded to coin money in his own name. The Porte being at that time on the eve of a dangerous war with Russia, had not leisure to attend to the proceedings of Ali Bey; so that the latter had an opportunity of going forward with his enterprizes very vigorously. His first expedition was against an Arabian prince named *Hammam*; against whom he sent his favourite Mohammed Bey, under pretence that the former had concealed a treasure entrusted with him by Ibrahim, and that he afforded protection to rebels. Having destroyed this unfortunate prince, he next began to put in execution a plan proposed to him by a young Venetian merchant, of rendering Gedda, the port of Mecca, an emporium for all the commerce of India; and even imagined he should be able to make the Europeans abandon the passage to the Indies by the Cape of Good Hope. With this view, he fitted out some vessels at Suez; and manning them with Mamlouks, commanded the bey Hassan to sail with them to Gedda, and seize upon it, while a body of cavalry under Mohammed Bey advanced against the town. Both these commissions were executed according to his wish, and Ali became quite intoxicated with his success. Nothing but ideas of conquest now occupied his mind, without considering the immense disproportion between his

own force and that of the Grand Signior. Circumstances were then indeed very favorable to his schemes. The Sheik Daher was in rebellion against the Porte in Syria; and the pacha of Damascus had so exasperated the people by his tortions, that they were ready for a revolt. Ali therefore made the necessary preparations. Ali Bey dispatched, in 1770, about 500 Mamlouks to take possession of Gaza, and thus secure entrance into Palestine. Osman the pacha of Damascus, however, no sooner heard of the invasion than he prepared for war, while the troops Ali Bey held themselves in readiness to fly on the first attack. Sheik Daher hastened to their assistance while Osman fled without even offering make the least resistance; thus leaving the command of all Palestine. About the end of 1771, the grand army of Ali Bey arrived; it was supposed to consist of 60,000 men. M. Volney allows that there might be two thirds of that number, who were classed as follows: 5000 Mamlouks, constituting the whole effective part of the army; 15,000 Arabs from Barbary on foot, constituting the whole infantry of the army. Besides these, the servants of the Mamlouks, each of whom had two, would constitute a body of 10,000 men. A number of other servants would constitute a body of about 2000; and the rest of the number would be made up by sutlers and usual attendants on armies. It was commanded by Mohammed Bey the friend of Ali. "But," says M. Volney, "as to order and discipline, these need not be mentioned. The armies of the Turkish Mamlouks are nothing but a confused multitude of horthemen, without uniforms, on horses of various colours and sizes, without either keeping ranks or observing any regular order." This multitude took the road to Acre, leaving wherever they passed sufficient marks of their rapacity and want of discipline. At Acre a junction was made with the troops of Sheik Daher, consisting of 1200 Safadians, the name of Sheik Daher's subjects from SAFAD, a village of Galilee, originally within his jurisdiction. These were on horseback, accompanied by 1200 Mamlouks cavalry under the command of Sheik Nassif, and about 1000 Mamlouk infantry. Thus they proceeded towards Damascus, while Osman prepared to oppose them by another army equally numerous and ill disciplined. "The Asiatics (says M. Volney,) are not acquainted with the elements of war. Their armies are mere mobs, their marches ravages, their campaigns inroads, and their battles bloody fights. The strongest or the most adventurous party in quest of the other, which frequently flies out making any resistance. If they stand on ground, they engage pell-mell, discharge carbines, break their spears, and hack each other with their sabres; for they have seldom any bayonets, and when they have, they are but of little service. A panic frequently diffuses itself without cause; one party flies, the other shouts victory, the vanquished submit to the will of the conqueror, and the campaign often terminates without battle. Such, in a great measure, were the military operations in Syria in 1771. The combined army of Ali Bey and Sheik Daher marched to Damascus. The Pachas waited for them; they pro-
ceeded

reached, and, on the 6th of June, a decisive ac-
 tion took place: the Mamlouks and Safadians
 rushed on the Turks with such fury, that, terri-
 fied at their courage, they immediately took flight,
 and the Pachas were not the last in endeavouring
 to make their escape. The allies became masters
 of the country, and took possession of the city
 without opposition, there being neither walls nor
 towers to defend it. The castle alone resisted.
 In ruinous fortifications had not a single cannon,
 such less gunners; but it was surrounded by a
 muddy ditch, and behind the ruins were posted a
 few musketeers; and these alone were sufficient
 to check this army of cavalry. As the besieged,
 however, were already conquered by their fears,
 they capitulated the 3d day, and the place was to
 be surrendered next morning, when, at day-break,
 an extraordinary revolution took place." This
 was no less than the defection of Mohammed Bey
 himself, whom Osman had gained over in a con-
 fidence during the night. At the moment there-
 fore, that the signal of surrender was expected,
 this treacherous general sounded a retreat, and
 turned towards Egypt with all his cavalry, flying
 with great precipitation as if he had been pur-
 sued by a superior army. Mohammed continued
 his march with such celerity, that the report of
 his arrival in Egypt reached Cairo only six hours
 before him. Thus Ali Bey found himself at once
 deprived of all his expectations of conquest; and
 what was worse, found a traitor whom he durst
 not punish at the head of his forces. A sudden
 reverse of fortune now took place. Several vessels
 laden with corn for Sheik Daher were taken by a
 Russian privateer; and Mohammed Bey, whom
 he degraded to have put to death, not only made
 his escape, but was so well attended, that he could
 not be attacked. His followers continuing daily
 to increase in number, Mohammed soon became
 sufficiently strong to march towards Cairo; and,
 in April 1773, having defeated the troops of Ali
 in a rencounter, entered the city sword in hand,
 while the latter had scarce time to make his escape
 with 800 Mamlouks. With difficulty he was en-
 abled to get to Syria by the assistance of Sheik
 Daher, whom he immediately joined with the
 troops he had with him. The Turks under Osman
 were at that time besieging Sidon, but raised the
 siege on the approach of the allied army, consist-
 ing of about 7000 cavalry. Though the Turk-
 ish army was at least three times their number,
 the allies did not hesitate to attack them, and gain-
 ed a complete victory. Their affairs now began
 to wear a more favourable aspect; but the milita-
 ry operations were retarded by the siege of Yafa,
 which had revolted, and though defended only by
 a garden wall, without any ditch, held out for 8
 months. In the beginning of 1773 it capitulated,
 and Ali Bey began to think of returning to Cairo.
 For this purpose Sheik Daher had promised him
 security; and the Russians with whom he had
 now contracted an alliance, made him a similar
 promise. Ali, however, ruined every thing by
 his own impatience. Deceived by an astrologer,
 who pretended that the auspicious moment when
 he was highly favoured by the stars was just arri-
 ved, he set out without waiting for the arrival of
 the allies. He was also farther deceived by a strata-

gem of Mohammed, who had by force extorted
 from the friends of Ali Bey letters pressing his re-
 turn to Cairo, where the people were weary of
 his ungrateful slave, and wanted only his presence
 in order to expel him. Ali Bey accordingly set out
 with his Mamlouks and 1500 Safadians given him
 by Daher; but no sooner entered the desert which
 separates Gaza from Egypt, than he was attacked
 by a body of 1000 chosen Mamlouks who were ly-
 ing in wait for his arrival. They were command-
 ed by a young Bey, named Mourad; who being
 enamoured of the wife of Ali Bey, had obtained a
 promise of her from Mohammed, in case he could
 bring him her husband's head. As soon as Mou-
 rad perceived the dust by which the approach of
 Ali Bey's army was announced, he rushed upon
 him, attacked and took prisoner Ali Bey himself,
 after wounding him in the forehead with a sabre.
 Being conducted to Mohammed Bey, the latter
 pretended to treat him with extraordinary respect,
 and ordered a magnificent tent to be erected for
 him; but in three days he was found dead of his
 wounds, as was given out; though some affirm,
 with equal probability, that he was poisoned. Af-
 ter the death of Ali Bey, Mohammed Bey took
 upon him the supreme dignity; but this change
 of masters proved of very little service to the Eg-
 yptians. At first he pretended to be only the
 defender of the rights of the Sultan, remitted the
 usual tribute to Constantinople, and took the cus-
 tomary oath of unlimited obedience; after which
 he solicited permission to make war upon Sheik
 Daher, the ally of Ali Bey. The reason of this
 request was a mere personal pique; and as soon
 as it was granted, he made the most diligent pre-
 parations for war. Having procured an extraor-
 dinary train of artillery, he provided foreign gun-
 ners, and gave the command of them to an Eng-
 lishman, named Robinson. He brought from Suez
 a cannon 16 feet long, which had for a consider-
 able time remained useless; and at length, in
 February 1776, he appeared in Syria with an ar-
 my equal to that which he had formerly com-
 manded under Ali Bey. Daher's forces, de-
 sirous of being able to cope with such a formidable
 armament, abandoned Gaza, which Mohammed
 immediately took possession of, and then marched
 towards Yafa. The history of this siege M. Volney
 gives as a specimen of the Asiatic manner of con-
 ducting operations of that kind. "Yafa (says
 he), the ancient Joppa, is situated on a part of
 the coast, the general level of which is very little
 above the sea. The city is built on an eminence,
 in the form of a sugar loaf, in height about 130
 feet perpendicular. The houses, distributed on
 the declivity, appear rising above each other, like
 the steps of an amphitheatre. On the summit is
 a small citadel, which commands the town; the
 bottom of the hill is surrounded by a wall with-
 out a rampart, of 12 or 14 feet high, and two or
 three in thickness. The battlements on the top
 are the only tokens by which it is distinguished from
 a common garden wall. This wall, which has no
 ditch, is environed by gardens, where lemons, or-
 ranges, and citrons grow in this light soil to a
 most prodigious size. The city was defended by
 5 or 600 Safadians and as many inhabitants, who,
 at the sight of the enemy, armed themselves with

their sabres and muskets; they had likewise a few brass cannon, 24 pounders, without carriages; these they mounted as well as they could, on timbers prepared in a hurry; and supplying the place of experience by hatred and courage, they replied to the summons of the enemy with menaces and cannon shot. Mohammed, finding he must have recourse to force, formed his camp before the town; but was to little acquainted with the business that he advanced within half cannon-shot. The bullets, which showered upon the tents, apprizing him of his error, he retreated; and, by making a fresh experiment, was convinced he was still too near. At length he discovered the proper distance, and set up his tent, in which the most extravagant luxury was displayed: around it, without any order, were pitched those of the Mamlouks, while the Barbary Arabs formed huts with the trunks and branches of the orange and lemon trees, and the followers of the army arranged themselves as they could: a few guards were distributed here and there; and, without making a single entrenchment, they called themselves encamped. Batteries were now to be erected and a spot of rising ground was made choice of to the SE. of the town, where, behind some garden walls, pieces of cannon were pointed, at 200 paces from the town; and the firing began, notwithstanding the musketry of the enemy, who, from the tops of the terraces, killed several of the gunners. It is evident that a wall only three feet thick, and without a rampart, must soon have a large breach in it; and the question was not how to mount, but how to get through it. The Mamlouks were for doing it on horseback; but they were told that this was impossible; and they consented, for the first time, to march on foot. It must have been a curious sight to see them, with their huge breeches of thick Venetian cloth, embarrassed with their tucked up *beniches*, their crooked sabres in hand, and pistols hanging to their sides, advancing and tumbling among the ruins of the wall. They imagined that they had conquered every difficulty when this obstacle was surmounted; but the besieged, who formed a better judgment, waited till they arrived at the empty space between the city and the wall; where they assailed them from the terraces and windows of the houses with such a shower of bullets, that the Mamlouks did not so much as think of setting them on fire, but retired under a persuasion that the breach was utterly impracticable, since it was impossible to enter it on horseback. Mourad Bey brought them several times back to the charge, but in vain. Six weeks passed in this manner; and Mohammed was distracted with rage, anxiety, and despair. The besieged however, whose numbers were diminished by the repeated attacks, became weary of defending alone the cause of Daher. Some persons began to treat with the enemy; and it was proposed to abandon the place, on the Egyptians giving hostages. Conditions were agreed upon, and the treaty might be considered as concluded, when, in the midst of the security occasioned by this belief, some Mamlouks entered the town; numbers of others followed their example, and attempted to plunder. The inhabitants defended themselves, and the attack recommenced: the

whole army then rushed into the town, which suffered all the horrors of war; women and children, young and old men, were all cut to pieces and Mohammed, equally mean and barbarous, caused a pyramid formed of the heads of these unfortunate sufferers to be raised as a monument to his victory." By this disaster the greatest terror and consternation were every where diffused. Sheik Daher himself fled, and Mohammed soon became master of Acre also. Here he behaved with his usual cruelty, and abandoned the city to be plundered by his soldiers. The French merchants claimed an exemption, and it was procured with the utmost difficulty: nor was even this likely to be of any consequence; for Mohammed informed that the treasures of Ibrahim, Kiaya Daher, had been deposited in that place, and an immediate demand of them, threatening even one of the merchants with death if the treasures were not instantly produced. A day was appointed for making the research; but before this could the tyrant himself died of a malignant fever after two days illness. His death was no sooner known than the army made a precipitate retreat. Sheik Daher continued his rebellion for some time, but was at last entirely defeated, and his head sent to Constantinople by Hassan Pacha the Turkish admiral. The death of Mohammed was no longer known in Egypt, than Mourad Bey hastened to Cairo in order to dispute the sovereignty with him Bey, who had been entrusted with the government on his departure from that place for Syria. Preparations for war were made on both sides; but at last, both parties, finding that a contest must be attended with great difficulty, well as very uncertain in the event, came to an accommodation, by which it was agreed that Ibrahim should retain the title of Shaik El Bek and the power should be divided between them. But now the beys and others who had been promoted by Ali Bey, perceiving their own importance totally annihilated by this new faction, resolved to shake off the yoke, and therefore united in a league under the title of *the House of Ali*. They conducted their matters with so much valour, lence and dexterity, that both Mourad and him were obliged to abandon Cairo. In a short time, however, they returned and defeated their enemies though three times their number; notwithstanding this success, it was not in their power totally to suppress the party. This indecision was owing entirely to their unskilfulness in the art of war, and their operations for some time were very trifling. At last, a new combination had been formed among the beys, five of them were sentenced to banishment in the Delta. They pretended to comply with this order, but took the road of the desert of the Pyramids, through which they were pursued for three days to no purpose. At last they arrived safe at Minia, a village situated on the Nile, 40 leagues above Cairo. Here they took up their residence, and became masters of the river, soon reduced Cairo to distress by intercepting its provisions. Thus a new expedition became necessary, and Ibrahim took the command of it upon himself. In Oct. 1798, he set out with an army of 3000 cavalry; the two armies soon came in sight of each other, and

But he thought proper to terminate the affair by negotiation. This gave such offence to Mourad, who suspected some plot against himself, that he fled to Cairo. A war betwixt the two rivals was daily expected, and the armies continued for days in sight of each other, only separated by a river. Negotiations took place; and the five chief beys, finding themselves abandoned by Mourad, took to flight, but were pursued and brought back to Cairo. Peace seemed now to be established; but the jealousy of the two rivals produced new intrigues, Mourad was once more obliged to quit Cairo in 1784. Forming his camp, directly at the gates of the city, he appeared so terrible to Ibrahim, that the latter thought proper in his turn to retire to the desert, where he remained till March 1785. A new treaty took place; by which the rivals agreed to divide the power between them.

EGYPT, INVASION AND CONQUEST OF, BY THE FRENCH. The last and not the least memorable event in the history of Egypt, is its late conquest by the French republican army under Buonaparte. On the 1st July 1798, the French with 30,000 men appeared on the coast of Egypt. The army disembarked at 11 o'clock at about 4½ miles from Alexandria. At day-break on the 2d July, they saw Pompey's Pillar, and after arriving at the city, which they found although opposed by a body of Arabs, who were to skirmish with their advanced guards. Bon forced the gate of Rosetta; gen. Meunier blocked up the triangular castle, and was the first who entered the town, in doing which he received 7 wounds. Gen. Kleber and Lascelles were wounded. The Arabs made a brave resistance, but before night the French were masters of Alexandria. On the 5th July, Gen. Buonaparte made a treaty of alliance with 13 principal chiefs of the Arabs, and after settling the terms, "in the name of the *sons of bell* on the first who should desert them." He then issued proclamations to the Egyptians, that he loved their prophet, respected their religion, &c. and was only come to destroy the beys and Mamelukes. On the 8th July, the French army arrived at Demenhour suffering much from the heat and want of water. On the 10th they arrived at Rhazek on the Nile, where the division under gen. Bon was attacked by 7 or 800 Mamelukes, and they defeated. Here they were joined by division under gen. Dugua, who had proceeded to Rosetta. On the 13th July, at day-break, they arrived at Chebreissia, with only 200 cavalry, and were harassed. "The Mamelukes," (says Buonaparte, in his dispatches to the Directory) "a magnificent body of cavalry, covered with gold and silver arms of the best kind; carabines, of London manufacture, the best sabres of the East, and were mounted on the best horses in the continent."—These soon inundated all the ranks, surrounded the wings of the French army, pressed them in flank and rear. The Mamelukes finding the French lines every where forming, and being opposed with a double fire from the front and rear, retreated with the loss of about 1000 men. In the mean time Perce, with 3 armoured ships, a chebeque and galley attacked their

flotilla and set fire to their admiral's ship. The celebrated chemists, Monge and Berthollet, were in the chebeque, and evinced great courage on the occasion. The army had marched for 8 days in the hottest of climates, and in want of every thing, when they arrived on the morning of the 20th July within sight of the PYRAMIDS, and in the evening within 6 miles of Cairo; where they learnt that the 23 beys with all their forces were entrenched at Lambabe, and covered with above 60 pieces of cannon. On the 21st at day-break, they met their advanced guard, whom they pursued from village to village. At 2 P. M. they reached the entrenchments of the beys, when Murat (or *Mourad*) Bey, observing gen. Delfaix and Reynier, taking a position to the right, between Gizah and Lambabe, to cut off his communication with Higher Egypt, sent one of his bravest beys, with a select body of troops, "who," says Buonaparte, "charged our troops with the rapidity of lightning. We let them approach within 50 paces, when we overwhelmed them with a shower of balls. They threw themselves between the two divisions, where they were received by a double fire, which finished their defeat." Thus began the *battle of the Pyramids*, which, (not to recapitulate all the particulars,) ended in a total defeat of the beys. Of 10,000 Mamelukes upwards of 7000 were cut to pieces, above 1000 more were drowned, and the rest fled almost all wounded. Great part of the beys were either killed or wounded. Murat Bey was wounded in the cheek. Yet amidst all this slaughter, if we may credit gen. Buonaparte, the loss of the French "amounted only to 20 or 30 killed, and 120 wounded!" Above 400 camels loaded with baggage, 300 horses richly accoutered, and 50 pieces of artillery were taken. Gen. Bon and Vial, took the fort by assault, and during the night Cairo was evacuated by the Mamelukes. The populace (whom Buonaparte styles "the most abandoned in the world") burnt the houses of the beys, and committed many excesses. Next morning the inhabitants sent deputies to meet gen. Buonaparte and the French army, who "entered (said the late admiral Bruycas) amidst the acclamations of all the people." Thus the French by the capture of Cairo became masters of all Egypt. Gen. Buonaparte upon his arrival on the coast of Alexandria had sent a letter to the Pacha of Egypt, dated "On board L'Orient, 12 Messidor," (June 30,) assuring him, that "the French were only come to punish the beys for their oppressions of the French merchants; that they came not to attempt any thing against the Alcoran or the Sultan; and inviting him to come and meet him, and *curse along with him* the impious race of the beys." He now sent another letter to the Pacha of Cairo, dated "Cairo, 2d Fructidor, (19 August.) 6th year," assuring him that his "intention is to preserve to the Pacha of the Grand Signior, his revenues and his appointment, and that he will take care the Porte shall continue to receive the tribute heretofore paid to it." These declarations, however, have not prevented Selim III. from declaring war against the French republic. See FRANCE. But while the French arms were attended with these successes in Egypt by land, their fleet on the coast met

with the most complete overthrow recorded in the history of naval tactics. See § 34. Of the importance of Egypt to France, M. Volney, who seems to have suggested the idea of its conquest before the revolution, writes thus :—"The extent of Egypt is almost two thirds of France, but in wealth may exceed its revenues three-fold. It contains all the productions of Europe and Asia, and possessed of that country alone we may give up all our other colonies. Lying almost at the door of France, 30 days would carry our fleets from Toulon to Alexandria. It is ill defended, easy to conquer, and easy to preserve. Nor are the advantages which it would yield confined to its own intrinsic value. Through Egypt we would get to India ; we would engross all the commerce of the Red Sea ; we would restore the ancient route of Suez, and cause the passage round the Cape of Good Hope to be deserted. By the Abyssinian caravans, we would draw in all the wealth of interior Africa, the gold dust, elephants teeth, gums, &c.—By favouring the pilgrimage to Mecca, we would enjoy the whole commerce of Barbary, as far as Senegal ; and thus our new acquisition, or rather France itself, would become the emporium, not only of Europe, but of the universe."

(22) EGYPT, INUNDATION OF, BY THE NILE. The river Nile, when swelled by the rains which fall in Abyssinia, begins to rise in Egypt about the month of May ; but the increase is inconsiderable till towards the end of June, when it is proclaimed by a public crier through the streets of Cairo. About this time it has usually risen five or six cubits ; and when it has risen to sixteen, great rejoicings are made, and people cry out *Waffab Allah*, i. e. God has given abundance. This commonly takes place about the end of July, or before the 20th of August ; and the sooner it takes place, so much the greater are the hopes of a good crop. Sometimes, though rarely, the necessary increase does not take place till later. In 1705, it did not swell to sixteen cubits till the 19th of September, the consequence of which was, that the country was depopulated by famine and pestilence. We may easily imagine, that the Nile cannot overflow the whole country of itself, in such a manner as to render it fertile. There are therefore, innumerable canals cut from it across the country, by which the water is conveyed to distant places, and almost every town and village has one of these canals. In those parts of the country, which the inundation does not reach, and where more water is required than it can furnish, as for watering of gardens, &c. they have recourse to artificial means for raising it from the river. Formerly they made use of ARCHIMEDES'S SCREW, (see HYDROSTATICS ;) but now in place of it they have the *Persian wheel*. This is a large wheel turned by oxen, having a rope hung with several buckets which fill as it goes round, and empty into a cistern at the top. Where the banks of the river are high, they frequently make a balon in the side of them, near which they fix an upright pole, and another with an axle across the top of that, at one end of which they hang a great stone, and at the other a leathern bucket ; this bucket being drawn down into the river by two

men, is raised by the descent of the stone, emptied into a cistern placed at a proper height. This kind of machine is used chiefly in the upper parts of the country, where the raising of water is more difficult than in places near the Nile. When any of their gardens or plantations are watered, it is conveyed from the cisterns into trenches, and from thence conducted all round the beds in various rills, which the gardener stops by raising the mould against them with his foot, and diverts the current another way when he sees occasion. The rise of the inundation is measured by an instrument adapted for the purpose, called *MISAS*, which we translate *METER*. Mr Bruce informs us, that this is situated between Geeza and Cairo, on the point of an island named *Rhodus*, about the middle of the river, but somewhat nearer to Geeza. It is a round tower with an apartment, in the middle of which is a cistern neatly lined with marble. The bottom of this cistern reaches to that of the river, and there is a large opening, by which the water has free access to the inside. The rise of the water is indicated by an octagonal column of black and white marble, on which are marked 24 bits of 22 inches each. The two lowermost bits are subdivided ; but each of the rest is divided into 24 parts called *digits* ; the whole height of the pillar being 36 feet 8 inches. When the water has attained its proper height, all the canals are opened, and the whole country laid under water. During the time of the inundation a certain regular motion of the waters takes place ; but notwithstanding this, the Nile is so easily managed that many fields lower than the surface of its waters are preserved from injury merely by a dam moistened earth, not more than 8 or 10 inches thick. This method is used particularly in the Delta when it is threatened with a flood. The Nile does not always rise to an height sufficient for the purposes of agriculture, the first sovereigns of Egypt were at vast pains to cut out new canals to supply the deficiency. Some of these are still preserved ; but great numbers have been rendered useless through the indolence or barbarity of their successors. Those which convey the water to Cairo, into the province of Fayoom, to Alexandria, have been best taken care of by the government. The last is watched by an officer appointed for that purpose, whose office it is to hinder the Arabs of Bachria, who receive this superfluous water, from turning it off before Alexandria is provided for, or opening it before proper time, which would hinder the increase of the river. In like manner, that which conveys the water to Fayoom is watched, and cannot be opened before that of Cairo, which is called the *Canal of Trajan*. A number of other canals, particularly taken care of by those who derive advantage from them, proceed from that arm of the Nile which runs to Damietta, and fertilize the province of Sharkia ; which, making part of the isthmus of Suez, is the most considerable of Egypt, and is the most capable of a great increase of cultivation. The plains of Gaza which lie beyond, and are possessed by the Arabs, would be no less fertile were it not for the excessive inclination of the soil, which the people have to destroy, so that they make war

with the spontaneous productions of the earth. A number of other canals run through the Delta; and the ridges of those which watered the provinces to the E. and W. show that in former times were the best cultivated parts of Egypt. "We may also presume (says the Baron de Tott), from the extent of the ruins of Alexandria, the construction of the canal, and the salubrious level of the lands which encompass the lake of Mariout, and extend W. to the kingdom of Barbary, that this country, at present given up to the sand, and almost desert, was once sufficiently fertile to produce every kind, to furnish the inhabitants of Alexandria with its whole subsistence."

EGYPT, MANUFACTURES, ARTS, &c.
The arts and all kinds of learning are at a low ebb among the Egyptians. Even the simple of the mechanical professions are still in a state of infancy. The work of their cabinet-makers, gunsmiths, and locksmiths, is extremely bad. There are manufactures of gunpowder; but the quality of both is very indifferently. The only thing, in which they can be said to have arrived at any degree of perfection, is the manufacture of silk stuffs; though even these are not so highly finished than those of Europe, and they bear a much higher price. One very extraordinary art indeed is still extant among the Egyptians, and appears to have existed in that country from the most remote antiquity; and that of enchanting the most deadly serpents in such a manner, that they allow themselves to be handled, nay even hurt and wounded severely, without offering to bite the person who injures them. Those who have this art are named *PSYLLI*. See that article.

(4.) EGYPT, MINERALS, MOUNTAINS, &c.
M. Volney takes notice of the inconvenience under which travellers labour in this country, which render it extremely difficult to say anything certain, with regard to the nature of the soil or its productions. These arise from the barbarism and superstition of the people, who imagine the Europeans to be magicians and forcerers, and come by their magic art to discover the treasures which the genii have concealed under their trances. So deep rooted is this opinion, that no man dares walk alone in the fields, nor can he find any one willing to accompany him; by which means he is confined to the banks of the river, and it is only by comparing the accounts of various travellers, that any satisfactory knowledge can be acquired. From comparing his own observations with those of other travellers, M. Volney concludes, that the basis of all Egypt from Asouan (the ancient Syene) to the Mediterranean, is a bed of calcareous stone of a whitish hue, and somewhat soft, containing the same kind of shells met with in the adjacent seas, and which form the immense quarries extending from Saouad to Mansalout, for more than 25 leagues, according to Father Sicard. Mr Bruce, however, gives a more particular account of the sources of the quantities of marble, met with in the ruins of ancient buildings in this country. These he discovered during his journey from Kenne to Suez on the Red Sea, before he went to Abyssinia. He gives a most dismal idea of the deserts

through which he passed. The few houses he met with were constructed of clay, being only 6 feet in diameter, and about 10 in height. The mountains were the most dreary and barren that can be imagined; and the heat of the sun so great, that two sticks rubbed together only for half a minute would take fire and flame. In these burning regions no living creature was to be met with, even the poisonous serpents and scorpions not being able to find subsistence. The first animal he saw was a species of ants in a plain, called *Hamra*, from the purple colour of its sand; and it was remarkable that these insects were of the same colour with the sand itself. No water was any where to be met with on the surface; though at a place called *Legeta* there were some draw-wells, the water of which was more bitter than foot itself. At Hamra the Porphyry Mountains and quarries begin, the stone of which is at first soft and brittle; but the quantity is immense, as a whole day was taken up in passing by them. These porphyry mountains begin in the latitude of nearly 24°, and continue along the coast of the Red Sea to about 22° 30', when they are succeeded by the marble mountains; these again by others of alabaster, and these last by basaltic mountains. From the marble mountains our author selected 12 kinds, of different colours, which he brought along with him. Some of the mountains appeared to be composed entirely of red and others of green marble, and by their different colours afforded an extraordinary spectacle. Not far from the porphyry mountains the cold was so great, that his camels died on his return from Abyssinia, though the thermometer stood no lower than 42°. Near Cossair he discovered the quarries whence the ancients obtained those immense quantities of marble, with which they constructed so many wonderful works. The first place, where the marks of their operations were very perceptible, was a mountain much higher than any they had yet passed, and where the stone was so hard that it did not yield to the stroke of a hammer. In this quarry he observed that some channels for conveying water terminated; which, according to him, shows that water was one of the means by which these hard stones were cut. In 4 days, during which our author travelled among these mountains, he says, that he had "passed more granite, porphyry, marble, and jasper, than would build Rome, Athens, Corinth, Syracuse, Memphis, Alexandria, and half a dozen such cities." It appeared to him that the passages between the mountains and what he calls *défilés*, were not natural but artificial openings; where even whole mountains had been cut out, in order to preserve a gentle slope towards the river. This descent Mr Bruce supposes not to be above one foot in 50; so that the carriages must have gone very easily, and rather required something to retard their velocity than any force to pull them forward. Concerning the mountains in general, he observes, that the porphyry is very beautiful to the eye, and is discovered by a fine purple sand without any gloss. An unvariegated marble of a green colour is generally met with in the same mountain; and where the two meet, the marble becomes soft for a few inches, but the porphyry retains its hardness. The

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granite

granite has a dirty brown appearance, being covered with sand; but on removing this, it appears of a grey colour with black spots, with a reddish cast all over it. The granite mountains lie nearer to the Red Sea, and seem to have afforded the materials for Pompey's pillar. The redness above mentioned seems to go off on exposure to the air; but re-appears on working or polishing the stone farther. The red marble is next to the granite, though not met with in the same mountain. There is also a red kind with white veins, and vast quantities of the common green serpentine. Some samples of that beautiful marble, named *Isabella*, were likewise observed; one of them of that yellowish cast called *quaker colour*, the other of the bluish kind named *dove colour*. The most valuable kind is that named *verde antico*, which is found next to the Nile in the mountains of serpentine. It is covered by a kind of blue fleshy stone, somewhat lighter than a slate, more beautiful than most kinds of marble, and when polished having the appearance of a volcanic lava. In these quarries the *verde antico* had been uncovered in patches of about 25 feet square. There were small pieces of African marble scattered about in several places, but no rocks or mountains of it; so that our author conjectures it to lie in the heart of some other kind. The whole is situated on a ridge with a descent to the E. and W. by which means it might easily be conveyed either to the Nile or Red Sea; while the hard gravel and level ground would readily allow the heaviest carriages to be moved with very little force. Travellers have talked of an emerald mine in these deserts; but from the researches of Mr Bruce, it does not appear to have any existence. In the Red Sea indeed, in lat. 25° 3', at a small distance from the SW. coast, there is an island called the *Mountain of Emeralds*; but none of these precious stones are to be met with there. Here, as well as on the continent, there were found many pieces of a green pellucid substance; but veined, and much softer than rock crystal, though somewhat harder than glass. A few yards up the mountain he found three pits, which are supposed to have been the mines whence the ancients obtained the emeralds; but though many pieces of the green substance above mentioned were met with about these pits, no signs of the true emerald could be perceived. This substance, however, he conjectures to have been the *smaragdus* of the Romans. In the mountains of Cosseir, as well as in some places of the deserts of Nubia, our author found some rocks exactly resembling petrified wood. The only metal said by the ancients to be produced in Egypt is copper. On the road to Suez are found great numbers of *Egyptian flints* and *pebbles*, though the bottom is a hard, calcareous, and sonorous stone. Here also M. Volney tells us, that the stones above mentioned, and which resemble petrified wood, are to be met with. These, he says, are in the form of small logs cut slanting at the ends, and might easily be taken for petrifications, though he is convinced that they are real minerals.

(25.) EGYPT, MISERABLE STATE OF THE PEOPLE OF. Whether the condition of the Egyptians will be greatly bettered by their new neighbours

the French, time will determine. The philo-
thropist will at least indulge the hope that it may be. But it is certain that no possible change of government can render it worse than it has long been under the Beys and the Mamelukes. The great part of the lands indeed were in the hands of the Mamlouks, beys, and professors of the law, the property of all others being very precarious. Contributions were demanded or damages to be repaired, every moment; and there was no right of succession nor inheritance for real property, but every thing must be purchased of the government. The peasants were allowed nothing but what is barely sufficient to sustain life. They cultivated rice and corn indeed, but were at liberty to use either. The only food among them is dora or Indian millet, from which they make a kind of tasteless bread; and of this, water and raw onions, consists all their food throughout the year. They esteem themselves happy, therefore, if along with these they sometimes procure a little honey, cheese, milk, or a few dates. They are very fond of meat and fat; neither of which, however, they had an opportunity of tasting, except at extraordinary festivals. Their ordinary dress consisted of a shirt of coarse blue linen, and a clumsy cloak; with a sort of black bonnet over their heads; and over all they wear a long red woollen handkerchief. Their arms, legs, and breasts, naked, and most of them do not even wear drawers. They live in mud-walled huts of the most miserable construction, where they are exposed to the inconveniences of smoke, heat, and unwholesome air; to all which are to be added the continual fear they live in of being robbed by the Arabs, oppressed by the Mamlouks, or some other grievous calamity. The only conversation concerning the intestine troubles and misery of the country, murders, bastinadoes, and executions. Here sentence of death is executed without the least delay or even form of trial. The officers who go the rounds in the streets either by night or day, are attended by executioners, who go along with them leathern bags for receiving the heads they cut off in these expeditions. Even the appearance of guilt is not necessary to infer a capital punishment; for frequently nothing more requisite than the possession of wealth, or being supposed to possess it. In this case the unfortunate person is summoned before some bey; and when he makes his appearance, a sum of money is demanded of him. If he denies that he possesses it, he is thrown on his back, and receives 2 or 3 blows on the soles of his feet; nay perhaps is sent to death without any ceremony. The only security of those who possess any wealth in this country therefore is, to preserve as great an appearance of poverty as possible.

(26.) EGYPT, POPULATION OF. In ancient times, when Egypt was governed by its native sovereigns, it is said to have contained 20,000 cities and towns: its armies to have amounted to 300,000 men, and its total population to 8 millions. By the tyranny of the beys and Mamelukes, it now hardly amounts to half that number. Dr Brook and Mr Walker state it so low as 2,300,000; but the rev. Mr Cruttwell makes it 4 millions. The inhabitant

inhabitants of Egypt have been long distinguished, into distinct races of people, viz. Arabs, Copts, Mamelukes, and Turks; to which the French will soon add a 5th race, if they continue to keep possession of the country.

1. EGYPT, ARABIAN INHABITANTS OF. The Arabs may be subdivided into three classes. 1. The posterity of those who settled here immediately after the conquest of the country by Amrou Ebn Al As, the khalif Omar's general. 2. The MAGREBIANS, or Western Arabs, who at different times have migrated from the countries to the westward of Egypt, and are descended, from the Saracen conquerors of Mauritania. 3. The BEDOUINS, or Arabs of the desert, known to the ancients by the name of *Semites*, or dwellers in tents. The first of these classes are now found among the husbandmen and artizans; and are distinguished from the others by being of a more robust habit of body, as well as of a larger stature than the others. They are in general 5 feet 4 inches high; and many of them attain 1 or 3 inches more, and are muscular without being fleshy. Their countenances are almost black, but their features are not disagreeable; and as those of the country do not ally themselves in marriage but with the people of their own tribe, their faces have all a strong resemblance to each other. This is not the case with such as live in towns, by reason of their promiscuous marriages. The second class are more numerous in the Said, where they have villages and even a distinct sovereignty of their own. Like the former, they apply themselves to agriculture and mechanical occupations. The Bedouins pass their lives among the rocks, ruins, and sequestered places where they can find water; sometimes uniting in tribes and living in low smoky tents, and shifting their habitations from the deserts to the banks of the river and back again, as best suits their convenience. Their time of inhabiting the desert is the spring; but after the inundation, they take up their residence in Egypt, in order to profit by the fertility of the country. Some farm lands in the country which they cultivate, but change annually. In general, all these Bedouins are robbers, and are a great terror to travellers, as well as to the husbandmen; but though their number is estimated at not less than 30,000, they are dispersed in such a manner that they cannot attempt any thing of consequence. See BEDOUINS.

II. EGYPT, COPTIC INHABITANTS OF. The Copts are descended of those inhabitants of Egypt whom the Arabs subdued, and who were composed of original Egyptians, Persians, and Greeks. M. Volney is of opinion that their name of Copts is merely an abbreviation of the Greek word *ΑΙΓΥΠΤΙΩΤΗΣ*, an Egyptian. They are principally to be met with in the Said, though some also inhabit the Delta. They have all a yellowish dusky complexion, pushed up visages, swollen eyes, flat noses, and thick lips; and in fact, the exact countenance of a mulatto. M. Volney, from a view of the sphynx, and finding its features to be such as is first described, concludes, that the ancient Egyptians were real negroes; which he thinks is likewise confirmed by a passage in Herodotus, where he concludes, that the inhabitants of Colchis were descended from the Egyptians, "on account of the

blackness of their skins and frizzled hair." M. Volney also remarks, that the countenance of the negroes is such, as exactly represents that state of contraction assumed by our faces when strongly affected by heat. The eye-brows are knit, the cheeks rise, the eye lids are contracted, and the mouth distorted; and this state of contraction, to which the features of the negroes are perpetually exposed in the hot climates they inhabit, is become particularly characteristic. Excessive cold and snow produces the same effect; and hence this kind of countenance is also common among the Tartars; while, in the temperate climates the features are proportionably lengthened, and the whole countenance expanded. The Copts profess the Christian religion, but follow the heresy of the Eutychians, (see COPTIC,) whence they have been persecuted by the Greeks; but having at last got the better of their adversaries, they have become the depositaries of the registers of the lands and tribes. At Cairo they are called *writers*; and are the intendants, secretaries, and collectors for government. The head of their class is writer to the principal chief; but they are all hated by the Turks to whom they are slaves, as well as by the peasants whom they oppress. Their language bears a great resemblance to the Greek; but they have five letters in their alphabet, as well as a number of words in their language, which may be considered as the remains of the ancient Egyptian. These bear a near resemblance to the dialects of some of the neighbouring nations, as the Arabic, Ethiopian, Syriac, &c. and even those who lived on the banks of the Euphrates. The language of the Copts, however, has fallen into disuse for upwards of 300 years. On the conquest of the country by the Saracens, the latter obliged the people to learn their language; and about the year 722 the use of the Greek tongue was prohibited throughout the whole of their empire; the Arabic language then of course became universal; while the others, being only met with in books, soon became totally neglected. The true Coptic, therefore, though there is a translation of the scriptures and many books of devotion written in it, is understood by nobody, not even the monks and priests. See COPTIC, § 1.

(III.) EGYPT, MAMELUKE INHABITANTS OF. Of the origin of the Mamelukes, we have already given an account, (§ 19, 20.) We have only to add some account of the most remarkable particulars, concerning their government, dress, manners, &c. The Mamelukes, before the French invasion, were the real masters of Egypt; and to secure themselves in the possession of the country, they took several precautions. One of the principal was the degradation of the military corps of azabs and janizaries, both of which were formerly very formidable. They effected this only in consequence of the wretched government of the Turks; for, before the revolt of Ibrahim Kiaya, the Turkish troops, which ought to have consisted of 40,000, were reduced to less than half that number through the avarice of their officers. Their degradation was completed by Ali Bey; who, having first displaced all the officers who gave him any umbrage, left their places vacant, and so reduced the consequence of the whole, that the azabs and

janizaries are now only a rabble, who dread the Mamlouks as much as the meanest of the populace. The principal body of the Mamlouks reside at Cairo; but many of them are dispersed through the country, in order to keep up their authority, collect the tribute, and oppress the people. They are all horsemen; and as war is accounted the only honourable employment among them, it is reckoned disgraceful to walk on foot, none but cavalry being by them accounted soldiers. They allowed other inhabitants only the use of mules and asses; and the same mark of indignity was imposed upon Europeans; though by liberal presents, this could be got over. In 1776, lord Algermon Percy, afterwards lord Louvaine, and the earl of Charlemont, obtained permission to ride upon horseback. The Mamlouks, however, are not incited to this continual appearance on horseback merely by their supposed superiority to the rest of the inhabitants; it is rendered necessary by their dress, which is extremely unwieldy and cumbersome. It consists of a wide shirt of thin yellowish-coloured cotton; over which is a gown of Indian linen, or some of the light stuffs of Damascus or Aleppo. Over this is a second covering of the same form and wideness, with sleeves reaching down to the ends of the fingers. The former covering is called *amari*, and the latter *caftan*. The caftan is usually made of silk or some finer stuff than the under garments; and both of them are fastened by a long belt, which divides the whole dress into two bundles. Over all these they have a third, named *djouba*, consisting of cloth without lining, and made nearly similar to the others, but that the sleeves are cut in the elbow. This coat is lined, sometimes even in summer, with fur; and, as if all this was not sufficient, they have an outer covering called the *beniche*, which is the cloak or robe of ceremony; and so completely covers the body, that even the ends of the fingers are not to be seen. Thus, when the beniche and other accoutrements are on, the whole body appears like a long sack, with a bare neck and bald head covered with a turban thrust out of it. This turban is called a *kaak*; and is of a cylindrical form, yellow, and turned up on the outside with a roll of muslin artificially folded up. On their feet they have a sock of yellow leather reaching up to the heels, and slippers without quarters, which consequently are always ready to be left behind in walking. Lastly, to complete this extraordinary dress, they have a kind of trousers, long enough to reach up to the chin, and so large that each of the legs is big enough to contain the whole body; but that they may walk more at their ease under such a number of impediments, they tie all the loose parts of their dress with a running fash. "Thus swaddled (says M. Volney,) we may imagine the Mamlouks are not very active walkers; and those who are not acquainted with the prejudices of different countries, will scarcely believe that they look on this dress as exceedingly commodious. In vain we may object that it hinders them from walking, and encumbers them unnecessarily on horseback; and that in battle a horseman once dismounted is a lost man. They reply, *It is the custom*, and every objection is answered." In the accoutrements of their horses,

the Mamlouks are almost equally absurd. The saddle is a clumsy piece of furniture, weighed with the saddle-cloths not less than 25 lb. while the weight of the stirrups is never less than 9 or 10 nay, often exceeds 13. On the back part of the saddle rises a trussquin about 8 inches in height while a pommel before projects 4 or 5 inches, as to endanger the breast of the horseman it should stoop. Instead of a stuffed frame, they have three thick woollen coverings below the saddle the whole fastened by a surcingle, which, instead of a buckle, is tied with leather thongs very complicated knots, and liable to slip. Instead of a crupper they have a large martingale which throws them upon the horse's shoulder. The stirrups are made of copper, longer & wider than the foot, having circular edges an inch high in the middle, and gradually declining towards each end. The edges are sharp, and instead of spurs, by which means the poor animals are much wounded. The weight of the furniture is the more ridiculous as the Egyptian horses are very small. The bridle is equally ill contrived, and greatly injures the horse's mouth especially by the violent method they have of managing the animal. Their usual way is to put the horse to a full gallop, and suddenly stop him while at full speed. Thus checked by the bit, he bends in his hind legs, stiffens the fore ones, and moves along as if he scarce had joints in his body: notwithstanding all those disadvantages, M. Volney says, they are vigorous horsemen, having martial appearance which pleases even strangers. In the choice of their arms they are more judicious. Their principal weapon is an English carbine about 30 inches long; but so large in the bore, that it can discharge 10 or 12 balls at a time which can scarce fail of doing great execution even from the most unskilful hand. Besides the large pistols carried in the belt, they have sometimes a heavy mace at the bow of the saddle knocking down their enemy; and by the shoulder-belt they suspend a crooked sabre, measured 24 inches in a straight line from the hilt to point, but 30 at least in the curve. The reason of the preference given to the crooked blade is that the effect of a straight one depends merely on the force with which it falls, and is confined to a small space, but that of a crooked one is continued longer by the action of the arm in retiring. The Mamlouks commonly procure their sabres at Constantinople, or other parts of Europe; but the bey's rival each other in those of Persia, and as are fabricated of the ancient steel of Damascus. For these they frequently pay as high as 400 or 500 l. sterling; but though it must be allowed the edge of these weapons is exquisitely keen, they have the defect of being almost as brittle as glass. The whole education and employment of the Mamlouks consists in the exercise of these weapons, or what is conducive to it; so that they should imagine they might at last become altogether irresistible. Every morning the greater part of them exercise themselves in a plain near Cairo, by firing their carbines and pistols in the most expeditious manner, having an earthen vessel for a mark to shoot at; and the person who breaks it is highly applauded by the bey's attendants.

used to encourage them. Here also they exercise themselves in the use of the sabre, as well as of the bow and arrows; though they do not any longer use these last in their engagements. Their favourite diversion is throwing the *djerid*; a word properly signifying a reed, but which is generally made use of to signify any staff thrown by the hand after the manner of the Roman pilum. In this exercise they make use of the branches of the palm tree fresh stripped. These branches, which have the form of the stalk of an artichoke, are about 4 feet long, and weigh 5 or 6 lb. With these the cavaliers enter the lists, riding full speed, and throwing them afterwards at each other from a considerable distance. As soon as the assailant has thrown his weapon, he turns his horse, and his antagonist pursues in his turn. The diversion, however, frequently turns out very serious, as they are capable of throwing these weapons with force sufficient to wound their antagonists mortally. Ali Bey was particularly dexterous at this kind of sport, and frequently killed those who opposed him. All these military exercises, however, are not sufficient to render the Mamlouks formidable in the field. In their engagements they have neither order, discipline, nor even subordination; so that their wars are only scenes of robbery, plunder, and tumultuary encounters. The strongest or most daring party pursues the other. If they are equal in courage, they will perhaps appoint a field of battle, and that without the least regard to advantages of situation, but fighting in platoons, and with the boldest champions at the head of each. After mutual defiance the attack begins, and every one chooses out his man. After discharging their fire arms, if they have an opportunity they attack with their sabres; and such as happen to be dismounted are helped up again by their servants; but if nobody happens to be near, the servants will frequently kill them for the sake of the money they carry about them. At last, however, the ordinary Mamlouks, who are all slaves to the rest, seem convinced that their masters are the persons principally interested; for this reason they reasonably enough conclude, that they ought to encounter the greatest dangers. Hence they generally leave them to carry on the war by themselves; and being always sure of finding a master who will employ them, they generally return quietly to Cairo until some new rebellion takes place. The mode of living among the Mamlouks is exceedingly expensive, as may easily be conceived from what has already been stated. There is not one of them who does not spend above 200 l. sterling annually, and many of them upwards of 200 l. At every return of the month of Ramadan; their masters must give them a suit of French and Venetian cloths, with stuffs from India and Damascus. Frequently they receive new horses and harness: they must likewise purchase pistols and sabres from Damascus, with gilt saddles, and saddles and bridles plated with silver. The chiefs are distinguished from the vulgar by their tinkets and precious stones they wear; by wearing Arabian horses of 200 l. or 300 l. value, and shawls of Cashmere in value from 25 l. to 50 l. each, with a variety of pelisses, the cheapest of which costs above 20 l. Even the European

merchants have adopted this kind of extravagance; so that not one of them looks upon his wardrobe to be decently furnished unless it be in value 500 l. or 600 l. Anciently it was customary for the women to adorn their heads with sequins; but this is now rejected as not sufficiently expensive. Instead of these, diamonds, emeralds, and rubies, are now substituted; and to these they add French stuffs and laces. In other respects the character of the Mamlouks is almost the worst that can be imagined. Without affection, tie, or connection with each other, or with the rest of mankind, they give themselves up without control to the most enormous vices; and, according to M. Volney, they are at once ferocious, perfidious, seditious, base, deceitful, and corrupted by every species of debauchery, not excepting even the unnatural vice; of which he tells us not one is free, this being the very first lesson each of them receives from his master, all having been originally slaves.

IV. EGYPT, TURKISH INHABITANTS OF. The Turks have the title of being masters of Egypt, but are chiefly to be met with at Cairo, where they possess the religious and military employments. Formerly they possessed also the posts under government; but these were of late monopolised by the Mamelukes, till the French invasion. If the war go on between the Grand Seigneur and the French republic, they will have little chance to recover them, unless they cordially join the French.

(27.) EGYPT, PYRAMIDS OF. See PYRAMIDS.

(28.) EGYPT, QUADRUPEDS, BIRDS, SERPENTS, &c. IN. Besides camels, horses, asses, mules, sheep, black cattle, and other domestic quadrupeds, there are many wild animals in Egypt; particularly tigers, hyenas, antelopes, crocodiles, apes with heads resembling those of dogs, hippopotamuses, ichneumons, chameleons, yellow lizards, and a species of rats resembling ferrets, remarkably useful for destroying the crocodiles eggs. Among the feathered tribe, there are ostriches, eagles, hawks, pelicans, and water fowls of various kinds, among which last the most remarkable is the ibis, a bird of the duck kind, which was deified by the ancient Egyptians, on account of its usefulness in destroying serpents and noxious insects. These are numerous, and among the different species of serpents the cerastes, or horned viper, abounds, whose bite proves mortal, except to those who have the secret of charming it. See § 23.

(29.) EGYPT, RELICS OF ANTIQUITY IN. "It would require volumes, (says John Walker, in his *Elements of Geography*,) to describe the astonishing remains of ancient temples, palaces, columns, statues, paintings, &c. that are so profusely scattered over a great part of this once renowned country." Some of these we have already described: See ALEXANDRIA, § 8, 10; and CATACOMBS, § 2: others will be found in their order. See LABYRINTH, N° 3; OBELISK, and PYRAMIDS.

(30.) EGYPT, SALT LAKES OF. F. Sicard mentions two lakes, from the water of which is produced annually a great quantity of salt, containing much mineral alkali; and M. Volney informs us, that the whole soil of this country is impregnated with salt; so that, upon digging to some depth in the ground, we always meet with brackish

water impregnated in some degree with the mineral alkali as well as with common salt. The two salt lakes are situated in the desert W. of the Delta; and are 3 or 4 leagues in length, and about a quarter of a league in breadth, with a solid and stony bottom. For 9 months in the year they are without water; but in winter there oozes out of the earth a reddish violet-coloured water, which fills the lakes to the height of 5 or 6 feet. This being evaporated by the return of the heat, there remains a bed of salt two feet thick and very hard, which is broken in pieces with iron bars; and no less than 30,000 quintals are procured every year from these lakes.

(31.) EGYPT, SOIL, FERTILITY, PRODUCE, &c. *OR.* M. Volney says, "the soil of Egypt is the most fruitful of the whole earth, the easiest cultivated and the most certain in its crops. Plenty does not there depend as in the Morea and Candia upon the contingency of rain." Egypt was in the earliest ages much celebrated for its fertility. This Volney ascribes to the salt with which it abounds. (See § 4.) So great is the propensity of the Egyptian soil to produce salt, that even when the gardens are overflowed for the sake of watering them, the surface of the ground, after the evaporation and absorption of the water, appears glazed over with salt. The water found in the wells contains mineral alkali, marine salt, and a little nitre. M. Volney is of opinion, that the fertile mould of Egypt, which is of a black colour, differs essentially from that of the other parts; and is derived from the internal parts of Ethiopia along with the waters of the Nile; but there is no reason to suppose this kind of earth to be of a foreign origin; it being always the result of vegetation and cultivation. Even the most barren and sandy spots in the world, if properly watered, and such vegetables planted in them as would grow there, in time would be covered with this black earth as well as others: and of this kind of artificial formation of soil, Dr Shaw gives a remarkable instance in the garden of the monks at Mount SINAI, which they have rendered very fertile, though the country is naturally as barren as in any place of the world. On the whole, we may reasonably conclude, that the natural fertility of Egypt is not diminished in modern times, provided the same pains were taken in the cultivation of it as formerly. "The Delta (says M. Savary) is at present in the most favourable state for agriculture. Washed on the E. and W. by two rivers formed by the division of the Nile, each of which is as large and more deep than the Loire, and intersected by innumerable rivulets; it presents to the eye an immense garden, all the different compartments of which may be easily watered. During the 3 months that the Thebais is under water, the Delta possesses fields covered with rice, barley, vegetables, and winter fruits. It is also the only part of Egypt where the same field produces two crops of grain within the year, the one of rice, the other of barley." Oranges, lemons, figs, dates, almonds, cassia, plantains, &c. abound in it. But the territory of Egypt in general produces every thing that either Europe or Asia can boast; as corn, rice, cotton, flax, indigo, sugar, saffron, coffee, fena, rhubarb, aloes, opium, &c. The only cause of all this fertility

is the Nile, without which the whole country would soon become an uninhabitable desert, as rain falls very seldom in this part of the world. See NILE.—The cause of decrease in the modern produce of Egypt compared with the ancient, is thus assigned by M. Savary: "The canals," says he, speaking of the Delta, "which used to convey fertility with their waters, are now filled up. The earth no longer watered, and continually exposed to the burning ardour of the sun, is converted into a barren sand. In those places where formerly were seen rich fields and flourishing towns, on the Pelusiac, the Taroitic, and the Mendesian branches, which all arise out from the canal of Damietta, nothing is to be found at the day but a few miserable hamlets, surrounded by date trees and by deserts. These once navigable canals are now no more than a vain resemblance of what they were: they have no communication with the lake Menzall, but what is merely temporary, on the swelling of the Nile; they are dry the remainder of the year. By deepening them, by removing the mud deposited by the river, the Turks have made themselves masters of Egypt, the country they pass through would be again fertilized, and the Delta recover a third of its greatness." This last expression of M. Savary alludes to an opinion he had formed, from his passages in Herodotus, Homer, and other ancient authors, that the Delta was produced by the accumulation of the mud brought down by the inundations of the Nile. For this opinion M. Savary produces various reasons, which, however, are fully refuted by M. Volney, as well as by Bruce in his Travels, to which we shall refer the reader. Indeed the whole dispute concerning the augmentation of the land of Egypt by the Nile seems to be absolutely decided; and the encroachments of it on the sea are so trifling, that we ought not entirely to attribute the apparent differences, to those which certainly take place between the ancient and modern mensuration.

(32.) EGYPT, TRADE OF. Notwithstanding the oppression under which the Egyptians labour (see § 25.) a very considerable trade is carried on from Cairo. This flourishing state of commerce in the midst of the most desperate barbarity and despotism is owing to three causes. 1. That the commodities consumed in Egypt are collected within the walls of that city. 2. That the Mahometans and all the people of property resided at that place, and there spent their whole revenues. 3. By the situation of this city, it is a centre of circulation; corresponding with Arabia and India by the Red Sea; with Abyssinia and the interior parts of Africa, by the Nile; and with Europe and the Turkish empire, by means of the Mediterranean. A caravan comes here annually from Abyssinia, bringing from 1000 to 1200 slaves, wax, gum, ivory, gold dust, ostrich feathers, parrots, and monkeys.—Another, which sets out from the extreme parts of Morocco, takes in pilgrims from Mecca from all that country as far S. as the mouth of the river Senegal. It consists of not fewer than 3 or 4000 camels; and, passing along the coast of the Mediterranean, collects likewise the pilgrims from Algiers, Tripoli, and Tunis, arriving

at Alexandria by the way of the desert. Proceeding thence to Cairo, it joins the Egyptian caravan; and then setting out both together, they take their journey to Mecca, from whence they return in 100 days; but the Morocco pilgrims, who have still 600 leagues to go, are upwards of a year in returning. The commodities they bring with them are, India stuffs, shawls, gums, perfumes, pearls, and coffee. Besides the profits of the merchandize, considerable sums arise from the duties paid by pilgrims, and the sums expended by them. The caravans above mentioned are the only means by which these commodities are brought to Cairo. They arrive also at Suez, which port the southerly winds bring in May as the sail of vessels from Jidda. Small caravans likewise arrive from time to time from Damascus with silk and cotton stuffs, oils, and dried goods. During the proper season there are also a number of vessels in the road of Damietta, unloading heads of tobacco from Latakia, vast quantities which are consumed in this country. For commodity rice is taken in exchange; while vessels bring clothing, arms, furs, passengers, wrought silk from Constantinople. Others come from Marseilles, Leghorn, and Venice, with cochineal, Lyons stuffs and laces, grocery, paper, iron, lead, Venetian sequins, and cashmere dahlers. These are conveyed to Rosetta, called by M. Volney *djerme*, but which is to be the same mentioned by Mr Bruce under the name of *canja*, and which are particularly noted by him. He says there is a peculiarity in the form of this vessel which makes it useful for navigating the river Nile: viz. that the keel is not straight, but a portion of a parabola, whose curve is almost insensible to the eye. Hence, as sandbanks are very common in the Nile, and vessels apt to strike them when the water becomes shallow, the middle of the canja will be aground at the extremities are afloat, and thus by means of oars and other assistance, it is always able to get clear; but were the keel straight, it would be altogether impossible, by reason of great sails those vessels carry, which would urge on with too much force to be recovered. The accommodation on board those vessels is better than what could be expected: but they are liable to the depredations of robbers, who swim under water in the day time, or upon skins during the night; though these seldom attack any boats where there are Europeans, as they dread on account of their skill in fire. From so many sources we need not wonder that the commerce of Cairo should be in a flourishing state. In 1783, according to the report of the commissioner general of the customs, amounted to no less than 6,250,000*l.* but notwithstanding this show of wealth, the trade carried on at Cairo contributes very little to the ease of the people. This will readily appear, if we consider, that great part of the coffee and other merchandize brought from India is exported to foreign countries, the value being paid for goods from Turkey and other European countries; while the country consumption consists entirely, or mostly, in articles of luxury already finished, and the produce given in return is mostly

in raw materials. Schemes have frequently been projected of enlarging the commerce of Egypt by cutting through the Isthmus of Suez, and thus joining the Mediterranean and Red Seas by a canal. See SUEZ. M. Volney considers it as impracticable. At present the commerce with Suez is only carried on by caravans, which set out about the end of April or beginning of May, or in July and August; waiting the arrival of the vessels, and setting out on their departure. The caravans are very numerous: that with which M. Volney travelled consisting of 5000 or 6000 men and 3000 camels. The country is a perfect desert, without a single tree or the smallest spot of verdure; so that every necessary for those who accompany the caravan must be carried on the backs of the camels, wood and water not excepted. The custom-houses of Egypt are in the hands of the Christians of Syria. Formerly they were managed by Jews; but these were completely ruined by the extortions of Ali Bey in 1769. The Syrian Christians came from Damascus above 60 years ago; and having by economy and industry gained possession of the most important branches of commerce, they were at length enabled to farm the custom-houses, which is an office of great consequence. There were at first only 3 or 4 families of them; but their number has since increased to more than 500, and they are reckoned very opulent.

(33) EGYPT, TRIBUTE PAID TO THE PORTE FROM. The highest tribute paid to the Grand Signior from Egypt did not exceed 800,000 aslani, or about L. 100,000 sterling a-year.

(34.) EGYPT, VICTORY GAINED BY ADMIRAL NELSON, ON THE COAST OF. Although it belongs more properly to the history of ENGLAND, than to that of EGYPT, to record the glorious victory obtained by Adm. Nelson over the French fleet, off the mouth of the Nile, yet as it took place in consequence of the French invasion of Egypt, it would be improper to conclude this article without mentioning at least the outlines of it. On the evening of the 1st Aug. 1798, the French fleet, when attacked by the British, was moored in a strong line of battle for defending the entrance of the Bay of Shoals; flanked by numerous gunboats, and a battery of guns and mortars, on the island of Aboukir or Bequieres, which lay in their van. It consisted of 13 ships of the line; viz. the Orient of 120 guns and 1010 men; 3 others of 80 guns and 800 men each; and 9 of 74 guns and 700 men each; besides 4 frigates, containing 164 guns and 1100 men. The British fleet consisted of 14 ships of the line, but of much inferior force; viz. 12 of 74 guns and 590 men each, 1 of 74 and 640 men, and 1 of 50 and 343 men; with a brig. Tho' the French were thus superior in the number of ships and guns, as well as of men, yet the British admiral and his officers, by their superior skill in naval tactics, and particularly by the manoeuvre of getting between the French ships and the shore, came upon that side of their fleet where they were least prepared for action, and thus, by the blessing of Almighty God, (as Sir Horatio himself piously expressed it,) gained one of the most complete victories, that ever was obtained in a naval engagement. Of the 13 ships of the line, 9 were taken,

4 burnt, and only 2 escaped: Of the 4 frigates, one was burnt, and one dismasted and sunk. The brave British admiral was wounded and captain Westcott killed during the action; and the noble brave admiral Bruyes was first wounded, and then cut in two by a grape-shot, before the Orient blew up. The battle is said to have lasted 19 hours; and the loss of men on board the 3 ships which were burnt and the frigate which was sunk, amounted to upwards of 2000. *Fig. 6. Pl. CXXIV.* represents the situation of the fleets while in action.

(35.) EGYPT, WATER OF. The only water in Egypt is that of the Nile, which flows with a very gentle stream through the flat country. Its waters are very muddy, so that they must have time to settle, or even require filtration before they can be drunk. For purifying the water, the Egyptians, according to M. Volney, use bitter almonds, with which they rub the vessel containing it, and then it becomes light and good; but on what principle this ingredient acts, cannot be determined. Unglazed earthen vessels filled with water are kept in every apartment; which by a continual evaporation through their porous substance, render the contained fluid very cool even in the greatest heats. See EVAPORATION. The river continues muddy for six months; and during the three which immediately precede the inundation, (See § 22.) the stream being reduced to an inconsiderable depth, becomes heated, green, fetid, and full of worms. The Egyptians in former times paid divine honours to the Nile, and still hold it in great veneration. They believe its waters to be very nourishing, and that they are superior to any in the world; an opinion very excusable in them, as they have no other, and large draughts of cold water are among their highest luxuries.

(36.) EGYPT, WINDS PECULIAR TO. The periodical return of winds from a certain quarter is a very wonderful phenomenon in this country. When the sun approaches the tropic of Cancer, they shift from E. to N. and in June, they always blow from the N. or NW. They continue northerly all July, varying only sometimes towards the E. and sometimes to the W. About the end of July, and during the whole of August and September, they blow directly from the N. and are but of a moderate strength, though somewhat weaker in the night than in the day. Towards the end of September they return to the E. though they do not absolutely fix on that point, but blow more regularly from it than any other except the N. As the sun approaches the southern tropic, they become more variable and tempestuous, blowing most commonly from the N. NE. and W. which they continue to do throughout December, January, and February; and, during that season, the vapours raised from the Mediterranean condense into mist, or even sometimes into rain. Towards the end of February, and in March, they more frequently blow from the S. than from any other quarter. During part of March, and in April, they blow from the S. SE. and SW. sometimes from N. and E. the latter becoming most prevalent about the end of that month, and continuing during the whole of May. It is to the long continuance of the N. winds, formerly called the ERESIAN WINDS, that Egypt probably owes its ex-

treme dryness, as well as part of the inundation by which it is fertilized. From April to July there appear to be two immense currents in the atmosphere, the under one blowing from the S. and the upper from the S. By the former the vapours are raised from the Mediterranean and the southern parts of Europe, where they are carried over Abyssinia, dissolving there in immense clouds of rain; while by the latter the superfluous vapours, or those raised from the country of Abyssinia itself, are carried northward toward the sources of the Euphrates. Here the clouds, coming from the S. descending into the lower part of the atmosphere, dissolve in like manner in rain, and produce an inundation of the Euphrate similar to that of the Nile, and immediately succeeding it. Mr Bruce had an opportunity of ascertaining this fact in June 1768; for at that time while on a voyage from Sidon to Alexandria, he observed great numbers of thin white clouds coming rapidly from the S. and in direct opposition to the Etesian winds.

(37.) EGYPT, WINDS UNCOMMONLY DESTRUCTIVE IN. Besides the ordinary winds above mentioned (§ 36.) Egypt is infested with the destructive blasts common to all warm countries which have deserts in their neighbourhood. These have been distinguished by various names, such as *sonorous winds, hot winds of the desert, Samich, wind of Damascus, Kamfin, and Simoom.* In Egypt they are denominated "winds of 50 days" because they most commonly prevail during 50 days preceding and following the equinox, though, should they blow constantly during half of that time, an universal destruction would be the consequence. Of these, travellers have given various descriptions. M. Volney says, that the violence of their heat may be compared to that of a large oven at the moment of drawing out the bread. They always blow from the S. and undoubtedly owing to the motion of the atmosphere over such vast tracts of hot land, where cannot be supplied by a sufficient quantity of moisture. When they begin to blow, the sky loses its usual serenity, and assumes a dark, heavy, and alarming aspect, the sun laying aside his usual splendor, and becoming of a violet colour. The terrific appearance seems not to be occasioned by any real haze or cloud in the atmosphere at that time, but solely to the vast quantity of fine dust carried along by those winds, and which is so excessively subtil that it penetrates every where. The motion of this wind is always rapid, but heat is not intolerable till after it has continued for some time. Its pernicious qualities are evidently occasioned by its excessive avidity of moisture. Thus it dries and shrivels up the skin, and by affecting the lungs in a similar manner produces suffocation and death. The danger is greatest to those of a plethoric habit, or who have been exhausted by fatigue; and putrefaction takes place in the bodies of such as are destroyed by it. Its extreme dryness is such, that was sprinkled on the floor evaporates in a few minutes all the plants are withered and stripped of their leaves; and a fever is instantly produced in the human species by the suppression of perspiration. It usually lasts 3 days, but is altogether insupportable.

A hand-drawn map of the Bay of Biscay, showing the coastline of France and the Bay of Biscay. The map includes labels for 'COAST OF BAY OF BISCAY', 'French frigates', 'Biscaya', and 'Cape Breton'. A compass rose is also present.

4

French Frigates

Battery

Cape Breton

French Line

OF
B A Y
B K Q U I R E

2 libranes

Adiguana

British Love

Franchise Line

of the

BRITISH and FRENCH FLEETS

MONTH of the VILE

1st August 1788.

Part of the British Fleet

Colloids

Shoals

Island with Battery

did not continue beyond that time. The danger is greater when the wind blows in squalls, and travellers who happen to be exposed to its fury without any shelter. The best method in such a case is to stop the nose and mouth with an handkerchief. Camels, by a natural instinct, bury their noses in the sand, and keep them there till the squall is over. The inhabitants, who have no opportunity of retiring to their houses, instantly that themselves up in them, or go into pits made in the earth, till the destructive blast is over. The description of a blast of this kind which overtook Mr Bruce in the desert of Nubia is still more terrible. We have already mentioned something of the pillars of moving sand raised by the winds in the desert. These were observed by our traveller on this occasion in all their terrific majesty. Sometimes they appeared to move slowly; at other times with incredible rapidity, so that they could not have been avoided by the fleetest horse. Sometimes they came so near, that they threatened destruction to the whole company. Frequently the tops, when arrived at an immense height, so that they were lost in the clouds, suddenly separated from the bodies, and dispersed themselves in the air; and sometimes the whole column broke off near the middle, as if it had received a cannon shot; and their size was such, that, at the distance of about three miles, they appeared ten feet in diameter. Next day they appeared of a smaller size, but more numerous, and sometimes approached within two miles of the company. The sun was now obscured by them, and the transmission of his rays gave them a dreadful appearance, resembling pillars of fire. This was pronounced by the guide to be a sign of the approaching *Simmoom* or hot wind; and he directed, that, when it came, the people should lie upon their faces and keep their mouths on the sand, to avoid drawing in this pernicious blast with their breath. On his calling out that the *Simmoom* was coming, Mr Bruce turned for a moment to the quarter from whence it came, which was the SE. It appeared like a haze or fog of a purple colour, but less bright than the purple part of the rainbow; seemingly about twenty yards in breadth, and about 12 feet high from the ground. Moved with such rapidity, that before he could lie about and fall upon his face, he felt the vehement heat of its current upon his face; and even when it passed over, which was very quickly, the air which followed was of such a heat as to threaten suffocation. Mr Bruce had unfortunately inhaled some part of the pernicious blast; by which means he almost entirely lost his voice, and became subject to an asthmatic complaint, from which he did not get free for two years. The same phenomenon occurred twice more on their journey through this desert. The 2d time, it came from the S. a little to the E. but it now seemed to be made of blue along with the purple, and its edges were less perfectly defined; resembling rather a thin smoke, and having about a yard in the middle tinged with blue and purple. The 3d time, it was preceded by an appearance of sandy pillars more magnificent than any they had yet observed; the sun shining through them in such a

manner as to give those which were nearest a resemblance of being spangled with stars of gold. The *Simmoom* which followed had the same blue and purple appearance as before, and was followed by a most suffocating wind for two hours, which reduced our travellers to the lowest degree of weakness and depondency. It was remarkable that this wind always came from the SE. while the sandy pillars, which prognosticated its approach, seemed to keep to the westward, and to occupy the vast circular space inclosed by the Nile to the west of their route, going round by Chaigie towards Dongola. The heaps of sand left by them when they fell, or raised by the whirlwinds which carried them up, were 12 or 15 feet high, exactly conical, tapering to a fine point, and their bases well proportioned.

EGYPTEN, a town of the duchy of Courland, 100 miles SE. of Mittau. Lon. 26. 40. E. Lat. 56. 2. N.

(1.) **EGYPTIAN**, *adj.* of or belonging to Egypt.

(2.) **EGYPTIANS**, the inhabitants of Egypt. See **EGYPT**, § 26. N° i.—v. To the different races mentioned under that section, may be added, a considerable number of Jews, Greeks, and Syrians, who are mingled with the other Egyptians.

(3.) **EGYPTIANS**, or **GYPSES**. See **GYPSES**.

(4.) **EGYPTIAN THORN**. See **ACACIA**.

EHAM, a village in the N. Peak of Derby.

EHIGEN, or } a town of Germany, in

(1.) **EHINGEN**, } Suabia, seated on the Danube; belonging to the emperor. Lon. 9. 45. E. Lat. 48. 18. N.

(2.) **EHINGEN**, or **EBINGEN**, a town in Suabia, on the Neckar, belonging also to Austria. See **EBINGEN**. Lon. 8. 45. E. Lat. 48. 25. N.

EHLE, a river of Germany, in the circle of Upper Saxony, which runs into the Elbe, near Magdeburg.

EHRENBURG, a citadel of Germany, in the county of Tyrol, on the frontiers of Suabia, 40 miles NE. of Inspruck.

EHRENBREITSTEIN, a fortress of Germany, in the Lower Electorate, and considered as the key of the Rhine and the Moselle, near Coblenz, on the E. or right side of the Rhine. It stood a long and severe siege by the French in 1796, and is at present, Dec 2d, 1798) closely blockaded by them, although it was one of the places submitted to the consideration of the congress at Rastadt.

EHRENFELS, or **EHRENFELS**, a fort and lordship of Germany, in the circle of Bavaria, and principality of Neuburg, 13 miles NW. of Ratisbon.

EHRENFRIEDERSDORF, or **IRBERDORF**, a town of Germany, in the circle of Upper Saxony, in the circle of Erzgebürg, founded in the year 1407. Near it are ten mines, formerly very rich. It is 3 miles W. of Wolfenstein.

EHRENSTEIN, a town and ancient castle of Germany, in the circle of Upper Saxony, and principality of Schwartzburg Rudolstadt, 10 miles NW. of Saalfeld.

EHRETIA, in botany: A genus of the monogynia order, belonging to the pentandria class of plants;

the electorate of Treves, the ci-devant duchy of Luxemburg, and the electorate of Cologne; now annexed to the French republic and included in the above department N^o 1. It belonged to the duke of Artemberg and several other German princes.

* **EIGH.** *interj.* An expression of sudden delight.

* **EIGHT.** *adj.* [*eachta*, Saxon; *alta*, Gothick; *acht*, Scottish.] Twice four. A word of number.—This island contains *eight* score and *eight* miles in circuit. *Sandys's Journey.*

* **EIGHTEEN.** *adj.* [*eight and ten.*] Twice nine.

He can't take two from twenty, for his heart, And leave *eighteen*. *Shakespeare's Cymbeline.*
—If men naturally lived but twenty years, we should be satisfied if they died about *eighteen*; and yet *eighteen* years now are as long as *eighteen* years would be then. *Taylor.*

EIGHTEEN MILE, or LONG BEACH, on the coast of New Jersey, lies between Little Egg Harbour inlet, and that of Barnegat.

* **EIGHTEENTH.** *adj.* [from *eighteen.*] The next in order to the seventeenth; twice ninth.—In the *eighteenth* year of Jeroboam reigned Abijam. *1 Kings.*

* **EIGHTFOLD.** *adj.* [*eight and fold.*] Eight times the number or quantity.

* **EIGHTH.** *adj.* [from *eight.*] Next in order to the seventh; the ordinal of eight.—

Another yet?—A seventh! I'll see no more; And yet the *eight* appears! *Shakespeare.*
—In the *eight* month should be the reign of Saturn. *Bacon.*—

I stay reluctant seven continu'd years,
And water her ambrosial couch with tears;
The *eight*th, she voluntarily moves to part,
Or urg'd by Jove, or her own changeful heart.

Pope.
* **EIGHTHLY.** *adv.* [from *eight*th.] In the eighth place.—*Eightly*, living creatures have voluntary motion which plants have not. *Bacon.*

* **EIGHTIETH.** *adj.* [from *eighty.*] The next in order to the seventyninth; eighth tenth.—Some balances are so exact as to be sensibly turned with the *eightieth* part of a grain. *Wilkins's Math. Mag.*

EIGHT-MILE BRIDGE, a village of Ireland, in the county of Down, 55 miles from Dublin.

* **EIGHT SCORE.** *adv.* [*eight and score.*] Eight times twenty; an hundred and sixty.—

What! keep a week away? seven days and nights?

Eight score eight hours? and lovers absent hours,
More tedious than the dial *eight* score times?

Oh weary reckoning! *Shakespeare's Othello.*

* **EIGHTY.** *adj.* [*eight and ten.*] Eight times ten; fourscore.—

Eighty odd years of sorrow have I seen,
And each hour's joy wreck'd with a week of teen. *Shakespeare.*

—Among all other climactericks three are most remarkable; that is seven times seven, or forty-nine; nine times nine, or *eighty* one; and seven times nine, or the year sixty-three, which is conceived to carry with it the most considerable fatality. *Brown's Vulgar Errors.*

* **EIGNE.** *adj.* [*aisne*, Fr.] [In law.] Denotes the eldest or first born. Here it signifies unalienable, as being entailed.—It happeneth not seldom,

that, to avoid the yearly oath, for averment the continuance of some estate for life, which *eigne*, and not subject to forfeiture for the alienation that cometh after it, the party will offer sue a pardon uncompeled before the time; in which some mitigation of the uttermost value well and worthily be offered. *Bacon.*

EIKEN, a town W. of Aldborough, Suffolk.

EIKETELLY, a village in Leicestershire.

EILENBURG, or EULENBURG, a town Germany, in the circle of Upper Saxony, and territory of Leipnick, 12 miles NE. of Leipnick, 15 miles WNW. of Meissen.

EIMBECK. See **EINBECK.**

EIMEO, or } one of the Society islands, in the

EIMEEO, } South Pacific ocean, almost wholly surrounded with rocks, 4 leagues W. from NW. part of Otaheite. See **COOK**, N^o III.

EINABI, a town of Asiatic Turkey, in the province of Natolia, 36 miles N. of Degnizim.

EINBECK, or EIMBECK, a town of Germany in the circle of Lower Saxony, and principality of Grubenhagen, on the Ilme, inclosed with walls and defended with redoubts, towers, &c. and containing 830 houses. It is the chief manufacturing town in the whole principality; and is 30 SSW. of Hildesheim, and 48 SSW. of Brunswick. It belongs to his Majesty as elector of Hanover. Lon. 9. 48. E. Lat. 51. 54. N.

EINDHOVEN. See **EYNDHOVEN.**

EINFIDEI, a town of Bohemia, in the circle of Pilsen, 8 miles W. of Teusling.

EINIEH, a town of Asiatic Turkey, in the province of Natolia, 44 miles SW. of Artaki.

EINSILDEN, a town of the Helvetic republic in the ci-devant canton of Schwitz, 15 miles of Zug.

EINVILLE, or } a town of France, in the

EINVILLE AU JARD. } department of Meuse, 12 miles E. of Nancy, and 4 N. of Lunéville.

* **EISEL.** *n. f.* [*essil*, Sax.] Vinegar, verjuice, any acid. An old word.—

Cast in thy mind

How thou resemblest Christ, as with sorrowful,

If thou paine thy taste, remember therewith
How Christ for thee tasted *eisel* and gall.

Sir T. M.

(1.) **EISENACH,** a principality of Germany, Thuringia, and circle of Upper Saxony, situated on the confines of Hesse. It is mountainous, hardly produces corn enough for the inhabitants. Some wine is made, but of a very indifferent kind. It has some mines of copper, iron, vitriol, and alum, with some salt springs. It belongs to the duke of Saxe-Weimar. It gives a vote to the duke of Saxe-Weimar, in the diets and assemblies of the circle. The tax is 58 six-dollars, 17 cruitzers. Eisenach is the capital.

(2.) **EISENACH,** the capital of the above principality. It has a college, and is seated on the Hesse; 40 miles E. of Weimar, and 26 WSW. of Erfurt. Lon. 10. 25. E. Lat. 50. 59. N.

(1.) **EISENBERG,** a town of Germany, in the circle of the Upper Rhine, and county of Würtemberg, with a castle, 3 miles SW. of Corbach.

(2.) **EISENBERG,** a town of Germany, in the circle

circle of Upper Saxony, and Margraviate of Meissen, 15 miles N. of Dresden.

EISENBURG, a town of Germany, in the circle of Upper Saxony, and principality of Saxony, 20 miles W. of Altenburg, and 30 SSW. of Leipzig.

EISENHARTZ, a town of Germany, in the circle of Stiria, enriched by iron mines, 10 miles S. of Leoben.

(1.) **EISENSTADT**, a town of Bohemia, in the circle of Koniggratz, 3 miles NNE. of Gitschin.

(2.) **EISENSTADT**, a town of Hungary, 8 miles S. of Eidenburg, and 16 S. of Vienna.

ESFELD, a town of Germany, in the circle of Upper Saxony, and principality of Coburg, on the Rhine, 8 miles E. of Hildburghausen.

ESGARN, a town of Germany, in the archduchy of Austria, 8 miles WNW. of Bohmisch-Budolfs.

ESKOL, a town of Russia, in the government of Caucasus, situated at the mouth of the river on the E. coast of the sea of Azoph, 50 m. S. of Azoph. Lon. 56. E. Lat. 46. 30. N.

ESLEBEN, a town of Germany, in the electorate of Saxony, and county of Mansfeld, once capital of a county of the same name. It has 12 churches, and about 700 houses. Martin Luther, the celebrated reformer, was born, and died in this town. It is 12 miles E. of Mansfeld, and 12 W. of Hall. Lon. 12. 16. E. Lat. 51. 25. N.

ESNACH. See **EISENACH**, N° 1 and 2.

ESSA, a village and barony of Germany, in the circle of Westphalia, 6 miles ENE. of Aix la-Chapelle.

ESDORF, or **EYSZDORF**, a town of Germany, in the circle of Upper Saxony, belonging to the bishopric of Merseburg, 4 miles ESE. of Lutzen.

ETDEVET, an ancient town of Morocco, famous for its schools. It is seated on a steep mountain, surrounded by craggy rocks, and encircled by two rivers.

ETHAN, or **YTHAN**, a river of Scotland, in the shire of Argyllshire. See **YTHAN**.

(1.) * **EITHER**. *adv.* [from the pronoun.] A positive adverb, answered by *or*; either the one or the other.—We never heard of any ship that had been seen to arrive upon any shore of Europe; nor of either the East or West Indies. *Bacon's New Method.*

What perils shall we find,
In either place, or time, or other course,
Could us to alter th' order now assign'd? *Daniel.*
E'er your brethren have miserably deceived,
Your power confers virtue. *Swift to Pope.*

(2.) * **EITHER**. *pron.* [*egither*, Saxon; *autther*, Dutch.] 1. Which soever of the two; whether one or the other.—

Lepidus flatters both,
Of both is flatter'd; but he neither loves,
Nor either cares for him. *Shakespeare.*

So like in arms these champions were,
As they had been a very pair;
As that a man would almost swear,
That either had been either. *Dryden's Nymph.*

Coming made a fast friendship with Digby, either

of them believing he could deceive the other. *Clarendon.*—I do not ask whether bodies do so exist, that the motion of one body cannot really be without the motion of another; to determine this *either* way, is to beg the question for or against a vacuum. *Locke.* 2. Each; both.—In the process of natural beings, there seem some to be creatures placed, as it were, in the confines of several provinces, and participating something of *either*. *Hale.*—

Sev'n times the sun has *either* tropick view'd,
The Winter banish'd, and the Spring renew'd.

Dryden's Virgil.

3. It is used sometimes of more than two; any one of a certain number. 4. Any of an indeterminate number, as in the following passage:—Henry VIII. Francis I. and Charles V. were so provident, as scarce a palm of ground could be gotten by *either* of the three, but that the other two would fet the balance of Europe upright again. *Baron.*

* **EJULATION**. *n. f.* [*ejulatio*, Latin.] Outcry; lamentation; moan; wailing.—Instead of hymns and praises, he breaks out into *ejulations* and effeminate wailings. *Government of the Tongue.*—

With dismal groans
And *ejulations*, in the pangs of death,
Some call for aid. *Philips.*

EKASTROW, a town of Russia, in the government of Archangel, 80 miles S. of Kola.

(1.) **EKATERINEBURG**, or **CATHERINEBURG**, a province of Russia, in the government of Perm, about 360 miles long, and from 100 to 160 broad.

(2.) **EKATERINEBURG**, the capital of the above province. It is 148 miles SE. of Perm, and 960 ESE. of Petersburg. Lon. 78. 0. E. of Ferro. Lat. 56. 45. N.

EKATERINENSLAF. See **CATHERINENSLAF**.

EKATERINOGRAD, or **CATHERINOGRAD**, a town of Russia, in the government of Caucasus, on the Malva, 260 miles SE. of Azoph, and 1080 SSE. of Petersburg. Lon. 61. 24. E. Ferro. Lat. 44. 15. N.

EKATERINOSLAV. See **CATHERINENSLAF**.

EKATERINOSLAVSKOI, or **CATHERINENSLAFSKOI**, a province of Russia, in the government of Ekaterinoflaw, comprehending what has formerly been called Budziac Tartary, and the Ukraine, now a part of the government of Ekaterinoflaw.

* **EKE**. *adv.* [*eat*, Saxon; *oak*, Dutch.] Also; likewise; beside; moreover.—

If any strength we have, it is to ill;
But all the good is God's, both power and *eka*.
the will. *Fairy Queen.*

Now if 'tis chiefly in the heart
That courage does itself exert,
'Twill be prodigious hard to prove,
That this is *eka* the throne of love. *Prior,*

* **To EKE** *v. a.* [*ecan*, Saxon.] 1. To increase. I dempt there much to have *eked* my store.

But such *eking* hath made my heart sore. *Spens.*
—The little strength that I have, I would it were with you.—And mine to *eke* out her's.

Shakesp. As you like it.

2. To supply; to fill up deficiencies.—

Still

Still be kind,
And *eke* out our performance with your mind.

Shakespeare.

Your ornaments hung all,
On some patch'd doghole *ek'd* with ends of wall.

Pope.

3. To protract ; to lengthen.—

I speak too long ; but 'tis to piece the time,
'To *eke* it, and to draw it out in length,
To stay you from election.

Shakespeare.

4. To spin out by useless additions. [In this sense it seems borrowed from the use of our old poets, who put *eke* into their lines, when they wanted a syllable.]

Eulden *ekes* out Blackmore's endless line.

Pope.

EKELSBEKE, a town of France, in the department of the North, 9 miles S. of Dunkirk.

EKENAS, a sea-port town of Sweden, in the province of Nyland, on the N. coast of the gulf of Finland, 50 miles SE. of Abo.

EKERDER, a town of Asiatic Turkey, in the province of Natolia, 16 miles E. of Isbarte.

EKEREFOR, or EKRENFORD, a town of Denmark, in the duchy of Sleswick, on the coast of the Baltic, 12 miles SE. of Sleswick. It has a good trade. Lon. 10. 20. E. Lat. 54. 56. N.

EKESIO, a town of Sweden, in the province of Smaland, 60 miles NW. of Calmar. Lon. 15. 12. E. Lat. 57. 28. N.

EKIE, a town of Asia, in Thibet, 55 miles S. of Tufon Hotun.

(1) EKINTON, N. E. of Dronfield, Derbysh.

(2) EKINGTON, a village in Worcestershire, near Pershore.

EKRAD, a town of Egypt, 10 miles SE. of Monfalout.

EKRENFORD. See EKEREFOR.

EKRON, a city and government of the Philistines. It fell by lot to the tribe of Judah, in the first division made by Joshua (xv. 45.) but was afterwards given to the tribe of Dan. (xix. 45.) It was situated near the Mediterranean, between Ashdod and Jamnia. Ekron was a powerful city and it does not appear that the Jews were ever sole peaceable possessors of it: the Ekronites were the first who said that it was necessary to send back the ark of the God of Israel, in order to be delivered from those calamities which the presence of it brought upon their country. 1 Sam. v. 10. The idol Baalzebub was principally adored at Ekron. 2. Kings i. 2. &c.

EKSAS, a town of Egypt, 21 miles S. of Cairo.

EKSENIDE, a town of Asiatic Turkey, in the province of Natolia, 84 miles S. of Degnizlu. Lon. 46. 45. E. Ferro. Lat. 36. 27. N.

* ELABORATE. *adj.* [*elaboratus*, Lat.] Fin-
ished with great diligence ; performed with great
labour.—Formalities of extraordinary zeal and
piety are never more studied and *elaborate* than
when politicians most agitate desperate designs.
King Charles.—

At least on her bestow'd
Too much of ornament, of outward shew
Elaborate ; of inward, less exact. *Milton.*

Man is thy theme, his virtue or his rage
Drawn to the life in each *elab'rate* page.

Waller.

—Consider the difference between *elaborate* courses upon important occasions, delivered in parliaments, and a plain sermon intended for common people. *Swift.*

* To ELABORATE. *v. a.* [*elaboro*, Lat.] To produce with labour.—

They in full joy *elaborate* a sigh.

2. To heighten and improve by successive efforts to operations.—The sap is diversified, still more *elaborated* and exalted, as it circulates through the vessels of the plant. *Arbutnot.*

* ELABORATELY. *adv.* [from *elaboro*] Laboriously ; diligently ; with great study of labour.—Politick conceptions, so *elaborately* formed and wrought, and grown at length ripe for use, do yet prove abortive. *South.*—Some coloured powders, which painters use, may have their colours a little changed, by being very *borately* and finely ground. *Newton.*—I will venture once to incur the censure of some people for being *elaborately* trifling. *Bentley.*—It is *elaborately* shewn, that patents are good. *See*

* ELABORATION. *n. f.* [from *elaboro*] Improvement by successive operations.—To what purpose is there such an apparatus of vessels for the *elaboration* of the sperm and eggs ; such a tedious process of generation and nutrition ?

ELABORATORY. See LABORATORY.

(1.) ELÆAGNUS, the OLEASTER, or OLIVE, a genus of the monogynia order, belonging to the tetrandria class of plants ; and in the natural method ranking under the 16th order, *lycifloræ*. There is no corolla ; the calyx is campanulate, quadrifid, superior ; the fruit is a p. below the campanulated calyx. This genus is not to be confounded with the oleaster or wild olive of Gerard, Parkinson, and Ray, which is one particular species of olive, called by Tournefort and Caspar Bauhine, *olea sylvestris*. See OLIVE. There are 3 species, viz.

1. ELÆAGNUS INERMIS, without thorns, the kind commonly preserved in the garden of this country. The leaves are more than 3 inches long, and half an inch broad, and have a shining appearance like satin. The flowers come out at the footstalks of the leaves, sometimes singly, other times two, and sometimes three, at the base of the leaf. The outside of the empalement is firm and studded ; the inside of a pale yellow. It has a very strong scent. The flowers appear in June and sometimes succeeded by fruit.

2. ELÆAGNUS LATIFOLIA, with oval leaves, is a native of Ceylon, and some other parts of India. In this country it rises with a woody stem to 8 or 9 feet, dividing into many crooked branches, garnished with oval and silvery leaves, which have several irregular spots of a dark colour on the surface. They are placed alternately on the branches and continue all the year.

3. ELÆAGNUS SPINOSA, the eastern broad leaved olive with a large fruit, is a native of the Levant and some parts of Germany. The leaves are about two inches long, and one and a half broad in the middle. They are placed alternately and of a silver colour : at the footstalk of every leaf there comes out a pretty long sharp thorn which are alternately longer ; the flowers are

that the inside of the empalement is yellow, and that it has a strong scent when fully open.

ELMAGNUS, CULTURE AND USES OF THE VULGAR SPECIES OF. The first and last species may be propagated by laying down the young shoots in autumn. They will take root in one year; when they may be cut off from the old stock, and either transplanted into a nursery for a year or two, or into places where they are to remain. The proper time is in the beginning of March, or early in autumn. They should be raised from high winds; for they grow very early, and are apt to be split by the wind, if too much exposed. The **LATIFOLIA** is too tender to endure the open air of this country; and therefore must be kept in a warm stove, except during hot time in the warmest part of summer. From a flower of these plants an aromatic and cordial has been drawn, which is said to have been successfully used in putrid and pestilential fevers.

LEOCARPUS, in botany, a genus of the Magnolia order, belonging to the polyandria of plants; and in the natural method ranking in those of which the order is doubtful. The corolla is pentapetalous and lacerated; the calyx is papery; and the fruit is a plum, with a naked kernel.

LEODENDRUM, in botany, a genus of the Magnolia order, belonging to the pentandria of plants.

LOMELI, in ancient medicine, a sweet oil, which is honey, said to flow from a tree in Syria, and to have been useful in bilious complaints.

LEOSACCHARUM, in pharmacy, a composition of oil and sugar.

LEOTHESIUM, in antiquity, the anointing room, or place where those who were to fight or had bathed anointed themselves. See **ANATHESIM**.

(1.) **ELAH**, the son of Baasha, the 4th king of Israel after the separation of the 10 tribes from Judah. He was murdered while he was drunk, in the 20th year of his reign, when he had reigned only two years, B. C. 934, and A. A. C. 934.

(2.) **ELAH**, in ancient geography, a valley of Israel, famous for the defeat and death of Goliath by David.

ELAIS, in botany, a genus belonging to the natural order of *Palmæ*. The male calyx is hexaphyllous; the corolla fissid; the stamina six: The female calyx is hexaphyllous; the corolla hexapetalous; the stigmata 3: the fruit a fibrous plum, with a three-valved kernel.

(3.) **ELAM**, (עֵלָם, Heb. *i. e.* a young man,) one of the sons of the patriarch Shem.

(4.) **ELAM**, in ancient geography, a country particularly mentioned in Scripture, lying SE. of Persia. In the time of Daniel (viii. 2.) Sufiana was to have been part of it; and before the captivity, it does not appear that the Jews called it by any other name. **ELYMÆ** and **Elymais** were mentioned by the ancients. Ptolemy, who makes Elymais a province of Media, places Elymæ in Sufiana, near the sea-coast. Strabo takes it to be a part of Assyria; but Pliny and Josephus more properly of Persia, whose inhabitants the latter tells us sprang from the Elamites. Vol. VIII. PART. I.

mites. The best commentators agree, that the Elamites, who were the ancestors of the Persians, were descended from **ELAM** the son of Shem. It is likewise allowed, that the inspired writers constantly intend Persia, when they speak of Elam and the kingdom of Elam. Thus, when the prophet Jeremiah (xlix. 39.) after denouncing many judgments against this country, adds these words, "But it shall come to pass in the latter days, that I will bring again the captivity of Elam, saith the Lord," he is always understood to mean the restoration of the kingdom of the Persians by Cyrus, who subdued the Babylonians, as they before had subdued the Persians.

ELAMITES, the ancient inhabitants of Persia. See last article.

ELAN, a town of S. Wales, in the county of Brecknock.

* **To ELANCE.** *v. a.* [*elancer*, Fr.] To throw out; to dart; to cast as a dart.—

While thy unerring hand *elanc'd*

Another, and another dart, the people
Joyfully repeated so!

Harsh words, that, once *elanc'd*, must ever fly.
Irrevocable.

ELAND, a river in Radnorshire.

ELAPHEROLIA, [from *ελαφς*, a deer,] in Grecian antiquity, a festival in honour of Diana the huntress. In the celebration a cake was made in the form of a deer, and offered to the gods. It owed its institution to the following circumstance: When the Phocians had been severely beaten by the Thessalians, they resolved, by the persuasion of one Deiphantus, to raise a pile of combustible materials, and burn their wives, children, and effects, rather than submit to the enemy. This resolution was unanimously approved by the women, who decreed Deiphantus a crown for his magnanimity. When every thing was prepared, before they fired the pile, they engaged their enemies, and fought with such desperate fury, that they totally routed them, and obtained a complete victory. In commemoration of this unexpected success, this festival was instituted to Diana, and kept with great solemnity.

ELAPHEBOLIUM, in Grecian antiquity, the 9th month of the Athenian year, answering to the latter part of February and beginning of March. It consisted of 30 days; and took its name from the **ELAPHEBOLIA**, which was celebrated in it.

ELAPHUS. See **CERVUS**, § I. N° vi.

* **To ELAPSE.** *v. n.* [*elapsus*, Lat.] To pass away; to glide away; to run out without notice.—There is a docible season, a learning time in youth, which, suffer to *elapse*, and no foundation laid, seldom returns. *Clariss.*

ELARAHAL, or **EL HARAHAL**, a town of Spain, in the province of Seville, 20 miles NW. of Seville.

ELASMIS, in natural history, a genus of talcs, composed of small plates in form of spangles; and either single, and not farther fissile; or, if complex, only fissile to a certain degree, and that in somewhat thick laminæ. Of these talcs there are several varieties, some with large and others with small spangles, which differ also in colour and other peculiarities.

(1.) * ELASTICAL. ELASTICK. *adj.* [from *elas.*] Having the power of returning to the form from which it is distorted or withheld; springy; having the power of a spring.—

By what *elastick* engines did she rear
The starry roof, and roll the orbs in air

Blackmore.

—If the body is compact, and bends or yields inward to pressure, without any sliding of its parts, it is hard and *elastick*, returning to its figure with a force rising from the mutual attraction of its parts. *Newton's Opticks.*—The most common disorders of human constitutions arise from the solids, as to their different degrees of strength and tension; in some being too lax and weak, in others too *elastick* and strong. *Arbuthnot.*—A fermentation must be excited in some assignable place, which may expand itself by its *elastical* power, and break through, where it meets with the weakest resistance. *Bentley.*

(2.) ELASTIC FLUIDS. See § 5, and AIR, ELECTRICITY, GAS, &c.

(3.) ELASTIC FORCE. See ELASTICITY.

(4.) ELASTIC GUM, OR } See GUM, ELASTIC.

(4.) ELASTIC RESIN, }

(5.) ELASTIC VAPOURS are such as may, by any external mechanical force, be compressed into a smaller space than they originally occupied; restoring themselves, when the pressure is taken off, to their former state, with a force exactly proportioned to that with which they were at first compressed. Of this kind are all the aerial fluids without exception, and all kinds of fumes raised by heat, whether from solid or fluid bodies. Of these, some retain their elasticity only when a considerable degree of heat is applied to them, or to the substances which produce them; while others remain elastic in every degree of cold, either natural or artificial, that has been observed. Of the former kind are the vapours of water, spirit of wine, mercury, sal ammoniac, and all kinds of sublimable salts; of the latter, those of spirit of salt, mixtures of vitriolic acid and iron, nitrous acid, and various metals; and in short, the different species of aerial fluids indiscriminately. The elastic force with which any one of these fluids is endowed has not yet been calculated, being ultimately greater than any obstacle we can put in its way. Thus, if we compress the atmospherical air, we shall find that for some little time it will easily yield to the force we apply; but every succeeding moment the resistance will become stronger, and a greater and greater force must be applied in order to compress it farther. As the compression goes on, the vessel containing the air becomes hot; but no power whatever has yet been able to destroy the elasticity of the contained fluid in any degree; for upon removing the pressure, it is always found to occupy the very same space that it did before. The case is the same with aqueous steam, to which a sufficient heat is applied to keep it from condensing into water. This will yield to a certain degree; but every moment the resistance becomes greater, until at last it will overcome any obstacles whatever. An example of the power of this kind of steam we have every day in the steam engine; and the vapours of other matters, both solid and fluid, have frequently manifested themselves to

be endowed with an equal force. Thus the force of the vapours of spirit of wine has occasioned terrible accidents when the worm has been fixed, and the head of the still absurdly tied down to prevent an explosion; the vapours of mercury have burst an iron box; and those of sal ammoniac, volatile salts, nitrous acid, marine acid, phosphorus, &c. have all been known to burst the chemical vessels which confined them with great force in such a manner as to endanger those who are near them. In short, from innumerable observations, it may be laid down as an undoubted fact that there is no substance whatever capable of being reduced into a state of vapour but what that state is endowed with an elastic force eminently superior to any obstacle we can throw in its way. It has been a desideratum among philosophers to give a satisfactory reason for this astonishing power of elasticity in vapour, which seemingly so little capable of accomplishing a great purpose when in an unconfined state. Air is that fluid in which, from the many experiments made upon it by the air-pump and otherwise, the elastic property has most frequently been observed, the researches of philosophers were first principally directed towards it. The causes they assigned, however, were very inadequate, being founded upon an hypothesis concerning the form of the particles of the atmosphere itself, which they supposed to be either rolled up like the spokes of wheels, or that they consist of a kind of elastic flakes. This was followed by another hypothesis concerning their substance, which was imagined to be perfectly elastic, and so strong that they could not be broken by any mechanical power whatever; and thus they thought the phenomenon of the elasticity of the air might be explained. But an insuperable difficulty still attended their scheme, notwithstanding both these suppositions; for it was observed, that the elastic power of the air was augmented, not only in proportion to the quantity of pressure it was made to endure but in proportion to the degree of heat applied to it at the time. Sir Isaac Newton was aware of this difficulty; and justly concluded, that phenomena of the air's elasticity could not be explained on any other supposition, than that of a repulsive power diffused all around each of its particles, which became stronger as they approached, and weaker as they removed from each other. Even the common phenomena of the air-pump and condensing engine received satisfactory explanation; but still it remained to account for the power shown in the present case by heat, which could not be denied that this element had a great share in augmenting the elasticity of the atmosphere, and seemed to be the only cause of its elasticity in other vapours. It does not appear that Sir Isaac entered into this question, but contented himself with attributing to heat the property of increasing repulsion, and ascribing this to an unexplored property called *rarefaction*. The matter stood till the great discovery made by Black, that some bodies have the power of absorbing in an unknown manner the elements of fire, and parting with it afterwards, so that it flows out of the body which had absorbed it with the very same properties that it had before.

absorption. Hence many phenomena of heat, and evaporation, were explained in a manner much more satisfactory, than had ever been attempted, or even expected before. One of these remarkable property of metals becoming brittle by hammering; during which operation, in the Doctor's opinion, the element of heat is squeezed out from between the particles of the metal, as water is from the pores of a sponge by squeezing it between the fingers. Of the same nature is the phenomenon above mentioned, that when violently compressed becomes hot, by reason of the quantity of more subtle element squeezed out from among the particles. In this case it appears, that heat and the repulsive power of Sir Isaac Newton are the very same; by diminishing the heat of any quantity of air, its elasticity is effectually diminished, and it will itself shrink into a smaller space as effectually as by mechanical pressure. In one case we have what may be called ocular demonstration of the truth of this doctrine, viz. that by throwing the end of a strong burning lens upon a small quantity of charcoal *in vacuo*, the whole will be converted into inflammable air, having even a greater degree of elasticity than common air in an equal state of heat. Here there is nothing else but heat or light to produce the elastic power, or to separate the particles of charcoal, which before acted now to repel each other. In another case there is evidence equally strong, that the element of heat by itself, without the presence of that of air, is capable of producing the same effect. When a phial of ether is put into the receiver of an air-pump, and surrounded by a small vessel of water, the ether boils violently, and is dissipated in vapour, while the water freezes, and is cooled to a great degree. The dissipation of this vapour shows that it has an elastic force; and the absorption of the heat from the water shows, that this element not only produces the elasticity, but actually enters into the substance of the vapour itself; that we have not the least reason to conclude, that there is any other repulsive power, by which the particles are kept at a distance from one another, than the substance of the heat itself. In what manner it acts, we cannot pretend exactly to explain, without making hypotheses concerning the nature of the minute particles of matter, which are always very uncertain. All known phenomena, however, concur in rendering the theory laid down extremely probable. The elasticity of the steam of water is exactly proportioned to the degree of heat which flows into it from the fire; and if this be kept up to a sufficient degree, there is no mechanical pressure which can squeeze it into the state of water. This, however, may very easily be done by abstracting a certain portion of the latent heat it contains; when the water vapour will become a dense and heavy fluid. The same thing may be done in various ways with the permanently elastic fluids. Thus the phlogogized dephlogisticated air, when made to part with its latent heat by burning with iron, is converted into a gravitating substance of an unknown nature, which adheres strongly to the metal. If the decomposition is performed by inflammable gas, both together unite into an heavy, aqueous,

or acid fluid: if by mixture with nitrous air, still the heat is discernible, though less violent than in the two former cases. The decomposition indeed is slower, but equally complete, and the dephlogisticated air becomes part of the nitrous acid, from which it may be again expelled by proper means: but of these means heat must always be one; for thus only the elasticity can be restored, and the air be recovered in its proper state. The same thing takes place in fixed air, and all other permanently elastic fluids capable of being absorbed by others. The conclusion therefore, which we can only draw from what data we have, concerning the composition of elastic vapours, is, that all of them are formed of a terrestrial substance, united with the element of heat in such a manner, that part of the latter may be squeezed out from among the terrestrial particles; but in such a manner, that as soon as the pressure is taken off, the surrounding fluid rushes in, and expands them to their original bulk: and this expansion or tendency to it will be increased in proportion to the degree of heat, just as the expansion of a sponge would be exceedingly augmented, if we could contrive to convey a stream of water into the heart of it, and make the liquid flow out with violence through every pore in the circumference. In this case, it is evident that the water would act as a power of repulsion among the particles of the sponge, as well as the fire does among the particles of the water, charcoal, or whatever other substance is employed. Thus far we may reason from analogy; but in all probability the internal and essential texture of these vapours will for ever remain unknown. Their obvious properties, as well as some of their more latent operations in many cases, will be more treated of under AEROLGY, EVAPORATION, VOLCANO, &c. It has been imagined by some, that the artificial elastic fluids have not the same mechanical property with common air, viz. that of occupying a space inversely proportional to the weights with which they are pressed: but this is found to be a mistake. All of them likewise have been found to be non-conductors of electricity, though probably not all in the same degree. Even aqueous vapour, when intimately mingled with any permanently elastic fluid, refuses to conduct this fluid, as is evident from the highly electrical state of the atmosphere in very dry weather, when we are certain that aqueous vapour must abound very much, and be intimately mixed with it. The colour of the electric spark, though it may be made visible in all kinds of permanently elastic vapours, is very different in different fluids. Thus in inflammable and alkaline air it is red or purple, but in fixed air it appears white.

(1.) * ELASTICITY. *n. f.* [from *elastic*.] Force in bodies, by which they endeavour to restore themselves to the posture from whence they were displaced by any external force. *Quincy*.—A lute-string will bear a hundred weight without rupture; but, at the same time, cannot exert its elasticity: take away fifty, and immediately it raiseth the weight. *Arbutnot*.—

Me emptiness and dulness could inspire,
And were my elasticity and fire.

(2.) ELASTICITY, CAUSE OF. The cause or principle

principle of elasticity, or springiness, is variously assigned. The Cartesians account for it from the *materia subtilis* making an effort to pass through pores that are too narrow for it. Thus, say they, in bending, or compressing, a hard elastic body, *e. g.* a bow, its parts recede from each other on the convex side, and approach on the concave: consequently the pores are contracted or straitened on the concave side; and if they were before round, are now, for instance, oval; so that the *materia subtilis*, or matter of the second element, endeavouring to pass out of those pores thus straitened, must make an effort, at the same time, to restore the body to the state it was in when the pores were more patent and round, *i. e.* before the bow was bent; and in this consists its elasticity. Other philosophers account for elasticity much after the same manner, but with this difference, that in lieu of the subtle matter, they substitute *ETHER*, or a fine ethereal medium that pervades all bodies. Others, setting aside the precarious notion of a *materia subtilis*, account for elasticity from the great law of *ATTRACTION*, or the cause of the *COHESION* of the parts of solid and firm bodies. Thus, say they, when a hard body is struck or bent, so that the component parts are moved a little from each other, but not quite disjointed or broken off, or separated so far as to be out of the power of that attracting force whereby they cohere; they must certainly, on the cessation of the external violence, spring back to their former natural state. Others resolve elasticity into the pressure of the atmosphere: for a violent tension, or compression, though not so great as to separate the constituent particles of bodies far enough to let in any foreign matter, must yet occasion many little vacuola between the separated surfaces; so that upon the removal of the force they will close again by the pressure of the aerial fluid upon the external parts. See *ATMOSPHERE*. Lastly, others attribute the elasticity of all hard bodies to the power of resiliency in the air included within them; and so make the *ELASTIC FORCE* of the air the principle of elasticity in all other bodies. See *ELASTIC*, § 5.

(3.) *ELASTICITY OF FLUIDS* is accounted for from their particles being all endowed with a centrifugal force; when Sir Isaac Newton, (*Prop. 23. lib. 2.*) demonstrates, that particles, which naturally avoid or fly off from one another by such forces as are reciprocally proportioned to the distances of their centre, will compose an elastic fluid, whose density shall be proportional to its compression; and *vice versa*, if any fluid be composed of particles that fly off and avoid one another, and hath its density proportional to its compression, then the centrifugal forces of those particles will be reciprocally as the distances of their centres.

(4.) *ELASTICITY OF THE AIR*, is the force wherewith that element dilates itself, upon removing the force whereby it was before compressed. See *AIR*, and *ATMOSPHERE*, § 6. The elasticity or spring of the air was first discovered by Galileo. Its existence is proved by this experiment of that philosopher: An extraordinary quantity of air being intruded by a syringe into a hollow glass or metal ball, till the ball, with this accession of air,

weigh considerably more in the balance than did before; upon opening the mouth thereof, the air rushes out, till the ball sink to its former weight. From hence we argue, that there is just as much air gone out, as compressed air had been crowded in. Air, therefore, returns to its former degree of expansion, upon removing the force that compressed or resisted its expansion; consequently it is endowed with an elastic force. It must be added, that as the air is found to rush out in every situation or direction of the orifice, the elastic force acts every way, or in every direction. The elasticity of the air makes a considerable article in *PNEUMATICS*. The cause of the elasticity of the atmosphere has been commonly ascribed to a pulsion between its particles; but this can give only a very slight idea of the nature of its elasticity. The term *repulsion*, like that of *attraction*, requires to be defined; and in all probability will be found in most cases to be the effect of the action of some other fluid. Thus, we find, that the elasticity of the atmosphere is very considerably affected by heat. Supposing a quantity of air heated to such a degree as is sufficient to raise Fahrenheit's thermometer to 212, it will then occupy a considerable space. If it is cooled to a degree as to sink the thermometer to 0, it will shrink up into less than half its former bulk. The quantity of repulsive power, therefore, acquired by the air, while passing from one of these states to the other, is evidently owing to the heat added to or taken away from it. Nor have we any reason to suppose, that the quantity of elasticity or repulsive power it still possesses is owing to any other thing than the fire contained in it. Supposing *repulsion* to be a primary cause independent of all others, has given rise to many erroneous theories, and been one very great means of embarrassing philosophers in their accounting for the phenomena of *ELECTRICITY*.

* *ELASTICK*. See *ELASTICAL*, § 1.

ELASTON, or *GLASTON*, a village in Somersetshire, on the Dove, near Cheddar.

(1.) *ELATE*, in botany, a genus belonging to the natural order of *Palme*. There is no calyx; the corolla is tripetalous, with 3 stamens. There is no female calyx; the corolla is tripetalous, with one pistil; the fruit is an oval accented plum.

(2.) * *ELATE*. *adj.* [*elatus*, Lat.] Flushed with success; elevated with prosperity; lofty; haughty.

Oh, thoughtless mortals! ever blind to fate
Too soon dejected, and too soon elate!

I, of mind elate, and scornful fear,
Thus with new taunts insult the monster's ear.

Pope's Odyssey

* *To ELATE*. *v. a.* [from the noun.] 1. To elevate with success; to puff up with prosperity.
2. To exult; to heighten. An unusual sense.

Or truth, divinely breaking on his mind,

Elates his being, and unfolds his power.

ELATER, in zoology; a genus of insects, belonging to the order of coleoptera. The antennae are setaceous; and an elastic spring or spine projects from the hinder extremity of the breast under side of the thorax. By means of this kind of spring, the animal, when turned upon his back, contrives to leap up into the air, and so on.

It varies in size; and when the insect is young and newly metamorphosed, its elytra are of a beautiful deep red; but in a few days they change to a much darker hue, and are nearly of a dusky colour. In the state of larvæ it inhabits the trunks of decayed trees, and is there transpired. With the help of its wings it issues from its prison, flutters upon flowers, wanders over the fields, and conceals itself in thickets or under the bark of trees. See *Plate CXXIV. fig. 5.*

(2.) ***ELATERIUM.** *n. f.* [Lat.] An inspissated juice, light, of a friable texture and an acrid and pungent taste. It is procured from the fruit of the wild cucumber. It is a very violent and rough purgative.

(3.) **ELATERIUM**, [Elaeagnis,] in botany, a genus of the monandria order, belonging to the monœcia class of plants; and in the natural method ranking under the 34th order, *Cucurbitaceæ*. There is neither male nor female calyx; the corolla is tubular; the capsule inferior, unilocular, and bivalve.

ELATH, or **ELOTH**, in ancient geography, a city of Idumæa, situated upon the Red Sea, which David in his conquest of Edom took, (2 Sam. viii. 14.) and there established a trade to all parts of the world. Solomon built ships in Elath, and sent them thence to Ophir for gold, (2 Chr. viii. 18. 11.) It continued in the possession of the Idumæans about 150 years, till the time of Joram, when the Edomites revolted and recovered it; (2 Kings viii. 20.) but it was again taken from them by Azariah, and by him left to his son; (2 Kings xiv. 22.) In the time of his grandson, however, Rezin king of Syria took it; (2 Kings xv. 6.) and the Syrians kept it long; till after many changes under the Ptolemies, it came at last into the possession of the Romans.

ELATINE, in botany: A genus of the tetrandria order, belonging to the octandria class of plants; and in the natural method ranking under the 15th order, *Imnædate*. The calyx is tetrandrous; the petals 4; the capsule quadriocular, bivalve, and depressed.

***ELATION.** *n. f.* [from *elate*.] Haughtiness proceeding from success; pride of prosperity. — It began to punish this vain elation of mind, by withdrawing his favours. *Atterbury.*

ELATMA, a town of Russia, in the government of Sambov, on the Oka, 132 miles N. of Moscow. Lon. 59. 28. E. Ferro. Lat. 55. 2. N.

ELATOSTEMA, in botany: A genus of the monandria order, belonging to the monœcia class of plants. The male flowers have no calyx; the corolla is quinquepartite; the stamina are five filaments. There are female flowers on the same plant; these have no calyx nor corolla; the perianthium is a very small oblong, bivalve, monolocular capsule; the seeds single and egg-shaped.

ELAY, a river of Wales, in the county of Glamorgan, which runs into the sea, near Pennarth.

ELBA, an island in the Mediterranean, near the coast of Tuscany, about 8 miles in length, and 2 in breadth; it contains some mines of iron and lead, and 2d quarries of fine marble; 36 miles N. of Cape Corso. Lon. 28. 6. E. Ferro. Lat. 42. 12. N.

ELBASSANO, a town of European Turkey, in Albania; 45 miles SE. of Durazzo. Lon. 20. 9. E. Lat. 41. 34. N.

(1.) **ELBE**, a large river in Germany, anciently called **ALBIS**, which, rising on the confines of Silesia, runs through Bohemia, Misnia, Upper Saxony, Anhalt, Magdeburg, Brandenburg, and Danneberg; and afterwards dividing the duchy of Lauenburg from that of Mecklenburg, as well as that of Breiten from Holstein, falls into the German ocean, about 70 miles below Hamburg. It is navigable for great ships higher than any other river in Europe.

(2.) **ELBE**, a river of Germany, in the circle of the Upper Rhine, which runs into the Eder, 2 miles SSE. of Fritlar, in the county of Waldeck.

ELBEDOUI, a town of Arabia, in the county of Yemsa, 14 miles S. of Abu Arif.

ELBERFELD, a town of Germany, in the circle of Westphalia, near Dusseldorf; on the E. or right bank of the Rhine. It was taken by the French in June, 1796.

ELBERT, a new county of the United States, in the upper district of Georgia, on the tract of land between Fugulo and Broad rivers. The SE. corner of the county is at their confluence, at the town of Petersburg. On the NW. it is bounded by Franklin county.

(1.) **ELBERTON**, the seat of justice in the above county, is 23 miles NW. of Petersburg, and 30 SE. of Franklin court house.

(2.) **ELBERTON**, a post town in Effingham county, Georgia, on the NE. bank of Okechee river. It is about 19 miles W. of Ebenezer, 48 NW. of Savannah, and 55 SE. of Louisville. Lon. 80. 30. W. Lat. 32. 18. 45. N.

(3.) **ELBERTON**, a village of England, 11 miles from Brittol.

ELBEUR, a town of France, in the department of the Lower Seine. It has a cloth manufacture, and is seated on the Seine, 10 miles S. of Rouen, and 65 NW. of Paris. Lon. 1. 8. E. Lat. 49. 19. N.

(1.) **ELBING**, a city of Polish Prussia, in the palatinate of Marienburg, seated on a bay of the Baltic sea, called the *Frischaff*, near the mouth of the Vistula. The town is large, populous, and very well built. It is divided into the old and new town, which are both well fortified. The old town has a handsome tower, with a good college. The stadthouse and the academy are good buildings, with pleasant gardens. The place has a considerable trade in sturgeon, mead, cheese, butter, corn, &c. It is seated in a champaign, level like Holland, very fruitful and populous. The inhabitants are partly Lutherans and partly Roman Catholics. The boors in the neighbourhood have as good houses and apparel almost as the nobility of Courland. Elbing is 30 miles SE. of Dantzick, and 100 N. by W. of Warsaw. Lon. 19. 35. E. Lat. 54. 9. N.

(2.) **ELBING**, a river of Polish Prussia, in Marienburg, near the city, N° 1.

ELBINGRODE, a town of Germany, 26 miles from Goslar, subject to K. George III. as elector of Hanover. In 1744, Marshall Belleisle, and his brother were arrested at this town. Lon. 10. 4. E. Lat. 51. 30. N.

(1.) **ELBOGEN**, a circle of Bohemia.

(2.) **ELBOGEN**,

(2.) **ELBOGEN**, the capital of the above circle, (N^o 1.) with a citadel, seated on the Eger, 16 miles NE. of Egra. Lon. 13. o. E. Lat. 50. 16. N.

(1.) * **ELBOW**. *n. f.* [*elhoga*, Sax.] 1. The next joint or curvature of the arm below the shoulder.

In some fair evening, on your *elbow* laid,

You dream of triumphs in the rural shade. *Pope*.

2. Any flexure, or angle.—Fruit trees, or vines, set upon a wall between *elbow*s or buttresses of stone, ripen more than upon a plain wall. *Bacon*.

3. To be at the **ELBOW**. To be near; to be at hand.—

Strait will he come;

Wear thy good rapier bare, and put it home:

Quick, quick; fear nothing, I'll be at thy *elbow*.

Shakespeare's Orhella.

(2.) **ELBOW**, that eminence whereon the arm rests, is by the Latins called *cubitus*, and the Greeks *αγκυρα*, and *επιπλευρα*. See *ANATOMY*, § 213.

(3.) **ELBOW** is also used by architects, masons, &c. for an obtuse angle of a wall, building, or road, which diverts it from its right line.

(1.) * To **ELBOW**. *v. a.* [from the noun.] 1. To push with the elbow.—

One *elbow*s him, one jostles in the shole.

Dryden's Juv.

2. To push; to drive to distance; to encroach upon.—

It thrusts and stretches out,

And *elbow*s all the kingdoms round about. *Dryd.*

If fortune takes not off this boy betimes,

He'll make mad work, and *elbow* all his neighbours.

Dryden.

(2.) * To **ELBOW**. *v. n.* To jut out in angles. *Deſ.*

* **ELBOWCHAIR**. *n. f.* [*elbow* and *chair*.] A

chair with arms to support the elbows.—Swans and *elbowchairs*, in the opera of Dioclesian, have danced upon the English stage with good success. *Gay*.

* **ELBOWROOM**. *n. f.* [*elbow* and *room*.]

Room to stretch out the elbows on each side; perfect freedom from confinement.—

Now my soul hath *elbowroom*;

It would not out at windows nor at doors. *Shak.*

—The natives are not so many, but that there may be *elbowroom* enough for them, and for the adventives also. *Bacon*.—A politician must put himself into a state of liberty to provide *elbowroom* for conscience to have its full play in. *South.*

(1.) **ELBURG**, a town of the Batavian republic, in the department of Yffel, and ci-devant province of Guelderland, seated on the E. coast of the Zuyder Zee, 10 miles NE. of Harderwick. Lon. 5. 50. E. Lat. 52. 30. N.

(2.) **ELBURG**, a village in Gloucestershire.

ELCATIF, a sea port of Arabia Felix, on the W. coast of the Gulf of Persia, 100 miles S. of Buſſarah. Lon. 53. 5. E. Lat. 26. o. N.

ELCESAI, a heretic of the 2d century, the founder of the **ELCESAITES**. See next article.

ELCESAITES, in church history, a sect of heretics, who appeared in the reign of Trajan. They worshipped one God, observed the Jewish Sabbath, circumcision, and the other ceremonies of the law; but they rejected the Pentateuch, the prophets, and the writings of the apostles, particularly those of St Paul.

ELCHE, a town of Spain in Valencia, seated in a forest of palm trees, olives, and vines, and famous for its wines and cattle. It is 8 miles SW of Alicant, according to Mr Cruttwell, but according to Dr Brookes. Lon. o. 23. W. Lat. 38. 7. N.

ELCHINGEN, an abbey of Germany, in the circle of Suabia, whose abbot is a prince of the empire. Its territory includes about 15 villages near Ulm.

ELCHO, a large and strong castle of Perthshire on the S. side of the Tay, about a mile below Kinfauns, belonging to the earl of Wemyss. Mr Cant, in his historical notes on *Adamson's Muſſi Threnodie*, says, the "Nunnery of Elcho was founded by David Lindsay of Glenelk and his mother; from whom the earls of Crawford are descended." Mr Adamson, in the text, mentions Elcho, as one of the retreats of the celebrated Scots patriot, Sir William Wallace:

"Elcho and *Elcho Park*, where WALLACE haunted:

"A sure refuge, when Englishmen he daunted."

* **ELD**. *n. f.* [*eald*, Sax. *eld*, Scottish.] Old age decrepitude.—

Her heart with joy unwonted inly swell'd,

As feeling wond'rous comfort in her weaker *eld*.

Spenser

Thy blazed youth

Becomes assuaged, and doth beg the alms Of palsied *eld*. *Shakespeare's Measure for Measure*

He thought it touch'd his deity full near,

If likewise he some fair one wedded not,

Thereby to wipe away th' infamous blot

Of long uncoupled bed and childless *eld*. *Mil.*

2. Old people; persons worn out with years.—

They count him of the green-hair'd *eld*.

Chapman

ELDA, a town of Spain, in the province of Valencia, 20 miles WNW. of Alicant.

ELDAGSEN, or **ELDAGSHAUSEN**, a town of Germany, in the circle of Lower Saxony, and principality of Calenberg, 16 m. ENE. of Hameln.

ELDEN, a village near Thetford, Norfolk.

ELDENA, a town of Germany, in the circle of Upper Saxony, and duchy of Pomerania, 3 m. E. of Grietswalda.

ELDEN HOLE, a famous natural cavern in Derbyshire, 3 miles from Buxton, ranked among the wonders of the Peak. It is a large and deep perpendicular chasm, of which the bottom has not yet been sounded, whence it is pretended to be unfathomable: Cotton says he sounded to the depth of 884 yards, yet the plummet still drew.

(1.) * **ELDER**. *adj.* The comparative of *old* now corrupted to *old*. [*eald*, *ealdor*, Sax.] Sup. passing another in years; survivor; having the privileges of primogeniture: opposed to *younger*.—They bring the companion of younger daughters conforming themselves in attire to their *elder* sisters. *Hooker*.—

Let still the woman take

An *elder* than herself; so wears she to him, So sways the level in her husband's heart. *Shakespeare*

How I firmly am resolv'd, you know;

That is, not to bestow my youngest daughter, Before I have a husband for the *elder*. *Shakespeare*

—Among

—Among the Lacedemonians, the chief magistrates, as they were, so were they called, *elder* *see Raleigh's Hist.*—The *elder* of his children comes to acquire a degree of authority among the younger, by the same means the father did among them. *Temple.*—

Fame's high temple stands ;

Supendous pile ! not rear'd by mortal hands !

What'er proud Rome, or artful Greece beheld,

Or *elder* Babylon, its frame excell'd. *Pope.*

(*Li. i.*) * *ELDER. n. f. [ellafsa, Sax. sambucus.]*

The name of a tree.—The branches are full of *leaves*, having but little wood : the flowers are monstrous, divided into several segments, and expanded in form of a rose : these are, for the most part, collected into an umbel, and are succeeded by *loose* succulent berries, having three seeds in each. It may be easily propagated from cuttings *see* *herds. Miller.*—

Look for thy reward

Amongst the nettles at the *elder* tree,

Which overshades the mouth of that same pit.

Shakespeare.

(*li.*) *ELDER*, in botany. See *SAMBUCUS*.

(*li. i.*) * *ELDERS. n. f. [from elder.]* 1. Per-

sons whose age gives them a claim to credit and reverence.—Rebuke not an *elder*, but intreat him as a father, and the younger men as brethren.

2 Tim. v. 1.—

Our *elders* say,

The barren, touched in this holy chafe,

Shake off their sterile curse. *Shakespeare. Jul. Cæs.*

The blushing youth their virtuous awe disclose,
And from their seats the reverend *elders* rose.

Sandys.

1. Ancestors.—Says the goose, If it will be no better, 't can carry your head as your *elders* have done before you. *L'Estrange.*—

I lose my patience, and I own it too,

Where works are censur'd, not as bad, but new ;

While, if our *elders* break all reason's laws,
These fools demand not pardon, but applause.

Pope.

Those who are older than others.—Many nations are very superstitious and diligent observers of old customs, which they received by continual tradition from their parents, by recording of their deeds and chronicles, in their songs, and by daily life and ensample of their *elders*. *Spenser's Irel.*—In the board, and in private, it very well becomes children's innocency to pray, and their *elders* to say Amen. *Look.* 4. [Among the Jews.] Rulers of the people. 5. [In the New Testament.] Ecclesiastics. 6. [Among presbyterians.] Laymen introduced into the kirk-polity in sessions, presbyteries, synods and assemblies.—

Flea-bitten synod, an assembly brew'd

Of clerks and *elders* ana ; like the rude

Chaos of presbytry, where laymen ride

With the tame woolpack clergy by their side.

Cleaveland.

(1.) *ELDERS*, or *SENIORS*, in ancient Jewish polity, were persons the most considerable for age, experience, and wisdom. Of this sort were the 70 men whom Moses associated with himself in the government ; such, likewise, afterwards were those

who held the first mark in the synagogue, as presidents.

(3.) *ELDERS*, in church history, were originally those who held the first place in the assemblies of the primitive Christians. The word *PRESBYTER* is often used in the New Testament in this signification : hence the first councils of Christians were called *PRESBYTERIA*, or *council of elders*.

(4.) *ELDERS*, in the Presbyterian discipline, are officers, who, in conjunction with the ministers and deacons, compose the kirk-sessions, who formerly used to inspect and regulate matters of religion and discipline ; but whose principal business now is to take care of the poor's funds, which, it is but justice to say, they do all over Scotland with the utmost fidelity. They are chosen from among the people, and are received publicly with some degree of ceremony. In Scotland, there is an indefinite number of elders in each parish ; generally about 12. See *KIRK-SESSIONS*, and *PRESBYTERY*.

* *ELDERLY. adj. [from elder.]* No longer young ; bordering upon old age.—I have a race of orderly *elderly* people of both sexes at command, who can bawl when I am deaf, and tread softly when I am giddy. *Swift to Pope.*

ELDERNAL, a village in Cambridgeshire, near Thorny Isle.

ELDERSFIELD, a parish of England, in Worcestershire, 10 miles in circuit, between Redmarley and Tewksbury.

* *ELDERSHIP. n. f. [from elder.]* 1. Seniority ; primogeniture.—The world, while it had scarcity of people, underwent no other dominion than paternity and *eldership*. *Raleigh.*—

That all should Alibeth adore, 'tis true ;

But some respect is to my birthright due :

My claim to her by *eldership* I prove. *Dryden.*

Nor were the *eldership*

Of Artaxerxes worth our least of fears,

If Memnon's interest did not prop his cause.

Roscoe.

2. Presbytery ; ecclesiastical senate ; kirk-session.—That controversy sprang up between Beza and Erasmus, about the matter of excommunications ; whether there ought to be in all churches an *eldership*, having power to excommunicate ; and a part of that *eldership* to be of necessity certain chosen out from amongst the laity. *Hooker, Preface.*

ELDES, a village in Northumberland, between Kirk-Haugh and Fetherston-Haugh.

* *ELDEST. adj.* The superlative of *eld*, now changed to *old*. [*eald, ealdor, ealdste*, Sax.] 1. The oldest ; that has the right of primogeniture.—

We will establish our estate upon

Our *eldest* Malcol n, whom we name hereafter
The prince of Cumberland. *Shakespeare. Macb.*

The mother's and her *eldest* daughter's grace,
It seems, had brib'd him to prolong their space.

Dryden.

2. The person that has lived most years.—*Eldest* parents signifies either the oldest men and women that have had children, or those who have longest had issue. *Locke.*

ELDITZKA, a fortress of Russia, in the government of Upha, on the river Upha, 50 miles N. of the town of Upha.

ELDON,

ELDON, a village in the county of Durham, SE. of Bishop's Auckland.

ELDPACH, a town of Germany, in the archduchy of Austria, 6 miles S. of Ips.

(1.) **ELEA**, or **ELIS**, in ancient geography, a district of Peloponnesus, situated between Achaia and Messenia, reaching from Arcadia quite to the west or Ionian sea; so called from the city of Elis. See **ELIS**, N° 2.

(2.) **ELEA**, or **VELIA**, an ancient town of the Lucani, where the **ELEATIC PHILOSOPHY** was first taught.

(3.) **ELEATIC PHILOSOPHY**, among the ancients; a name given to that of the **STOICS**, because taught at **ELEA**. See § 2.

(2.) **ELEATIC SECT.** The founder of this sect of philosophers is supposed to have been **Xenophanes**, who lived about the 56th Olympiad, or about A. A. C. 550. It was divided into two parties, which may be denominated *metaphysical* and *physical*; the one rejecting, and the other approving, the appeal to fact and experiment. Of the former kind were **Xenophanes**, **Parmenides**, **Melissus**, and **Zeno of Elea**. They are supposed to have maintained principles similar to those of **Spinoza**; they held the eternity and immutability of the world; that whatever existed was only one being; that there was neither any generation nor corruption; that this one being was immovable and immutable, and was the true God; and whatever changes seemed to happen in the universe, they considered as mere appearances and illusions of sense. However, some learned men have supposed, that **Xenophanes** and his followers, speaking metaphysically, understood by the universe, or the one being, not the material world, but the originating principle of all things, or the true God, whom they expressly affirm to be incorporeal. Thus **Simplicius** represents them as merely metaphysical writers, who distinguished between things natural and supernatural; and who made the former to be compounded of different principles. Accordingly, **Xenophanes** maintained, that the earth consisted of air and fire, that all things were produced out of the earth, and the sun and stars out of clouds, and that there were 4 elements. **Parmenides** also distinguished between the doctrine concerning metaphysical objects, called *truth*, and that concerning physical or corporeal things, called *opinion*; with respect to the former there was one immovable principle, but in the latter two that were moveable, viz. fire and earth, or heat and cold; in which particulars **Zeno** agreed with him. The other branch of the Eleatic sect were the atomic philosophers, who formed their system from an attention to the phenomena of nature; of these the most considerable were **Leucippus**, **Democritus**, and **Protagoras**.

(1.) * **ELECAMPANE**. *n. f.* [*helenium*, Lat.] A plant, named also star-wort. Botanists enumerate 30 species of this plant. *Miller*.—The Germans have a method of candying *elecampa* root like ginger, to which they prefer it, and call it German spice. *Hill's Materia Medica*.

(2.) **ELECAMPANE**, in botany. See **INULA**.

(1.) * **ELECT**. *adj.* [from the verb.] 1. Chosen; taken by preference from among others.—

You have here, lady,

And of your choice, these reverend fathers,
Yea, the *elect* of the land, who are assembled
To plead your cause. *Shakesp Henry VI*

2. Chosen to an office, not yet in possession.—The bishop *elect* takes the oaths of supremacy, canonical obedience, and against simony; and then the dean of the arches reads and subscribes the sentences. *Ascham's Purgeron*. 3. [In theology.] Chosen as an object of eternal mercy.—A vicious man believing that Christ died for none but the elect, shall have attempts made upon him to reform and amend his life. *Hammond*.—

Some I have chosen of peculiar grace,
Elect above the rest: so is my will. *Miln*

(2.) **ELECT**, or **CHOSEN**, in the Scriptures, applied to the primitive Christians; in which sense the elect are those chosen and admitted to the favour and blessing of Christianity. See § 1. *def.*

* To **ELECT**. *v. a.* [*electus*, Lat.] 1. To choose for any office or use; to take in preference others.—

Henry his son is chosen king, though young
And Lewis of France, *elect* first, beguiled. *Dan*

—This prince, in gratitude to the people, whose consent he was chosen, *elect*ed a hundred senators out of the commoners. *Swift*. 2. [In theology.] To select as an object of eternal mercy.

ELECTI. See **CATECHUMEN**, § 2.

(1. 1.) * **ELECTION**. *n. f.* [*electio*, Latin.] The act of chusing; the act of selecting one more from a greater number for any use or office choice.—If the *election* of the minister should be committed to every several parish, do you think that they would chuse the meetest? *Whitgift*

Him, not thy *election*,
But natural necessity, begot. *Miln*

—As charity is, nothing can more increase lustre and beauty than a prudent *election* of objects and a fit application of it to them. *Spratt*. 2. The power of choice —

For what is man without a moving mind,
Which hath a judging wit, and chusing will
Now if God's power should her *election* bid
Her motions then would cease, and stand still. *Dan*

3. Voluntary preference —He calls upon the sinners to turn themselves and live; he tells us, that he has set before us life and death, and refers it to our *election* which we will chuse. *Rogers*. —Discernment; distinction; discrimination.—The discovering of these colours cannot be done but out of a very universal knowledge of things, which so cleareth men's judgment and *election*, it is the less apt to slide into error. *Bacon*. —In favour, to use men with much difference and *election* is good: for it maketh those preferred more than usual, and the rest more officious. *Bacon*. 5. [In theology.] The predetermination of God, by which any were selected for eternal life.—The conceit about absolute *election* to eternal life, some enthusiasts entertaining, have been made remiss of the practice of virtue. *Atterbury*. 6. The choice of a publick choice.—I was sorry to be with what partiality, and popular heat, *elections* were carried in many places. *King Charles*.—*Sin*

the dissolution of the club, many persons put up for the next election. *Addison's Spectator.*

(A) ELECTION is also used for the state of a man who is left to his own free will, to take or leave one thing or another, which he pleases.

OF LIBERTY.

(B) ELECTION, (§ 1. *def.* 3.) differs from CHOICE in this, that election has usually a regard to a company or community, which makes the choice; whereas choice is seldom used but when a single person makes it.

(C) ELECTION, in theology. See § 1. *def.* 5. and PREDESTINATION. It has been enjoined as a article of faith, that predestination to grace is gratuitous, merely and simply so; *gratia, quia non merita.* But divines greatly differ, whether election to glory be gratuitous, or whether it supposes obedience and good works, *i. e.* whether it be before or after the provision of our obedience.

OF GRACE, and REPROBATION.

(D) ELECTION, in British polity, is the people's choice of their representatives in parliament.

OF PARLIAMENT. In this consists the exercise of the democratical part of our constitution: for in a democracy there can be no exercise of sovereignty but by suffrage, which is the declaration of the people's will. In all democracies, therefore, it is of the utmost importance to regulate by laws, and in what manner, the suffrages are to be given. And the Athenians were so justly jealous of this prerogative, that a stranger, who intervened in the assemblies of the people, was punished with death, being esteemed guilty of high treason, by usurping those rights of sovereignty to which he had no title. In Britain, says Blackstone, where the people do not debate in a collective body, but by representation, the exercise of sovereignty consists in the choice of representatives. The laws have therefore very strictly guarded against the usurpation or abuse of this power, by many salutary provisions; which may be reduced to these three points, 1. The qualifications of the electors. 2. The qualifications of the elected. 3. The proceedings at elections.

ELECTION LAWS AS TO THE QUALIFICATIONS OF ELECTORS. The true reason of requiring any qualification, with regard to property in voters, is to exclude such persons as are in such a situation, that they are esteemed to be no will of their own. If these persons had their will, they would be tempted to dispose of them for some undue influence or other. This would be a great, an artful, or a wealthy man, a larger influence in elections than is consistent with general equity. If it were probable that every man would vote freely, and without influence of any kind; then, upon the true theory and genuine principles of liberty, every member of the community, however poor, should have a vote in electing those delegates to whose charge is committed the disposal of his property, his liberty, and his person.

But since that can hardly be expected in a state of indigent fortunes, or such as are under the immediate dominion of others, all popular assemblies have been obliged to establish certain qualifications; whereby some, who are suspected to be no will of their own, are excluded from voting, in order to set other individuals, whose will

may be supposed independent, more thoroughly upon a level with each other. And this constitution of suffrages is framed upon a wiser principle, with us, than either of the methods of voting, by centuries or by tribes, among the Romans. In the method by centuries; instituted by Servius Tullius, it was principally property, and not numbers, that turned the scale: in the method by tribes, gradually introduced by the tribunes of the people, numbers only were regarded, and property entirely overlooked. Hence the laws passed by the former method had usually too great a tendency to aggrandize the patricians or rich nobles: and those by the latter had too much of a levelling principle. Our constitution steers between the two extremes. Only such are entirely excluded as can have no will of their own: there is hardly a free agent to be found, but what is entitled to a vote in some place or other in the kingdom. Nor is comparative wealth, or property, entirely disregarded in elections; for though the richest man has only one vote at one place, yet, if his property be at all diffused, he has probably a right to vote at more places than one, and therefore has many representatives. This is the spirit of our constitution: not that we assert it is in fact quite so perfect as we have endeavoured to describe it; for if any alteration might be wished or suggested in the present form of parliaments, it should be in favour of a more complete representation of the people. But to return to the qualifications; and first those of electors for knights of the shire. 1. By statute 8 Hen. VI. c. 7. and 10 Hen. VI. c. 2. (amended by 14 Geo. III. c. 58.) the knights of the shire shall be chosen of people, whereof every man shall have freehold to the value of 40 sh. by the year within the county; which (by subsequent statutes) is to be clear of all charges and deductions, except parliamentary and parochial taxes. The knights of shires are the representatives of the landholders, or landed interest of the kingdom: their electors must therefore have estates in lands or tenements within the county represented. These estates must be freehold, that is, for term of life at least; because beneficial leases for long terms of years were not in use at the making of these statutes, and copyholders were then little better than villeins, absolutely dependent upon their lords. This freehold must be of 40 sh. annual value; because that sum would then, with proper industry, furnish all the necessities of life, and render the freeholder, if he pleased, an independent man: For bishop Fleetwood, in his *Chronicon Pretiosum*, written at the beginning of the present (18th) century, has fully proved 40 sh. in the reign of Henry VI. to have been equal to 12 l. *per annum* in the reign of Queen Anne; and, as the value of money is very considerably lowered since the bishop wrote, we may fairly conclude, from this and other circumstances, that what was equivalent to 12 l. in his days, is equivalent to 20 l. at present. The other less important qualifications of the electors for counties in England and Wales may be collected from the statutes 7 and 8 Will. III. c. 25. 10 Ann. c. 23. 2 Geo. II. c. 21. 18 Geo. II. c. 18. 31 Geo. II. c. 14. 3 Geo. III. c. 24. which direct, 2. That no person under 21 years of age shall be capable of voting

for any member. This extends to all sorts of members as well for boroughs as counties; as does also the next, viz. 3. That no person convicted of perjury, or subornation of perjury, shall be capable of voting in any election. 4. That no person shall vote in right of any freehold, granted to him fraudulently to qualify him to vote. Fraudulent grants are such as contain an agreement to recovery, or to defeat the estate granted; which agreements are made void, and the estate is absolutely vested in the person to whom it is so granted. And, to guard the better against such frauds, it is farther provided, 5. That every voter shall have been in the actual possession, or receipt of the profits, of his freehold to his own use for 12 kalendar months before; except it came to him by descent, marriage, marriage settlerent, will, or promotion to a benefice or office. 6. That no person shall vote in respect of an annuity or rent-charge, unless registered with the clerk of the peace 12 kalendar months before. 7. That in mortgaged or trust-estates, the person in possession, under the abovementioned restrictions, shall have the vote. 8. That only one person shall be admitted to vote for any one house or tenement, to prevent the splitting of freeholds. 9. That no estate shall qualify a voter, unless the estate has been assented to some land-tax aid, at least 12 months before the election. 10. That no tenant by copy of court-roll shall be permitted to vote as a freeholder. Thus much for the electors in counties. As for the electors of citizens and burgesses, these are supposed to be the mercantile part or trading interest of this kingdom. But as trade is of a fluctuating nature, and seldom long fixed in a place, it was formerly left to the crown to summon *pro re nata*, the most flourishing towns to send representatives to parliament. So that as towns increased in trade, and grew populous, they were admitted to a share in the legislature. But the misfortune is, that the deserted boroughs continued to be summoned, as well as those to whom their trade and inhabitants were transferred; except a few which petitioned to be eased of the expence, then usual, of maintaining their members: four shillings a-day being allowed for a knight of the shire, and two shillings for a citizen or burgess; which was the rate of wages established in the reign of Edward III. Hence the members for boroughs now bear above a quadruple proportion to those for counties; and the number of parliament men is increased since Portefcuc's time, in the reign of Henry VI. from 300 to upwards of 500, exclusive of those for Scotland. The universities were, in general, not empowered to send burgesses to parliament; though once, in 28 Edw. I. when a parliament was summoned to consider of the king's right to Scotland, there were issued writs, which required the university of Oxford to send up four or five, and that of Cambridge two or three, of their most discreet and learned lawyers for that purpose. But it was king James I. who indulged them with the permanent privilege to send constantly two of their own body; to serve for those students who, though useful members of the community, were neither concerned in the landed nor the trading interest; and to protect in the legislature the rights of the

republic of letters. The right of election in boroughs is various, depending entirely on the several charters, customs, and constitutions of the respective places; which has occasioned infinite disputes: though now, by statute 2 Geo. II. c. 5. the right of voting for the future shall be allowed according to the last determination of the house of commons concerning it; and, by statute Geo. III. c. 13. no freeman of any city or borough (other than such as claim by birth, marriage, servitude) shall be intitled to vote therein, unless he hath been admitted to his freedom 12 kalendar months before.

5. ELECTION LAWS AS TO THE QUALIFICATIONS OF PERSONS TO BE ELECTED. Some of the qualifications to be elected members of the house of commons depend upon the law and custom of parliaments, declared by the house; others upon certain statutes. And from these it appears, 1. That they must not be aliens born, minors. 2. That they must not be any of the judges, because they fit in the lords' house; of the clergy, for they fit in the convocation; persons attainted of treason, or felony, for they are unfit to sit anywhere. 3. That sheriffs, counties, and mayors and bailiffs of boroughs, are not eligible in their respective jurisdictions, nor returning officers; but that sheriffs of county are eligible to be knights of another. That, in strictness, all members ought to have been inhabitants of the places for which they are chosen; but this, having been long disregarded, was at length entirely repealed by statute 14 Geo. III. c. 58. 5. That no persons concerned in management of any duties or taxes created since 1692, except the commissioners of the treasury, nor any of the offices following (viz. commissioners of prizes, transports, sick and wounded, licences, navy, and victualling; secretaries or receivers of prizes; comptrollers of the army accounts; agents for regiments; governors of garrisons, and their deputies; officers of Minorca or Gibraltar; officers of the excise and customs; clerks or deputies in the several offices of the treasury, exchequer, navy, victualling, admiralty, of the army or navy, secretaries of state, stamps, appeals, wine-licences, hackney-coach, hawkers, and pedlars), nor any person that has any new office under the crown created since 1705, are capable of being elected or sitting members. 6. That no person having a peerage under the crown during pleasure, or for any term of years, is capable of being elected or sitting. That if any member accepts an office under the crown, except an officer in the army or navy, or accepting a new commission, his seat is void; such member is capable of being re-elected. That all knights of the shire shall be actual knights or such notable esquires and gentlemen as have estates sufficient to be knights, and by no means of the degree of yeomen. This is reduced to still greater certainty, by ordaining, 9. That every knight of a shire shall have a clear estate of freehold or copyhold to the value of 600 l. *per annum* and every citizen and burgess to the value of 300 l. except the eldest sons of peers and of persons qualified to be knights of shires, and except the members for the two universities: which somewhat balances

balance the ascendant which the boroughs have gained over the counties, by obliging the trading class to make choice of landed men: and of the qualification the member must make oath, and give in the particulars in writing, at the time of his taking his seat. But, subject to these standing restrictions and disqualifications, every subject of the realm is eligible of common right: though there are instances, wherein persons in particular circumstances have forfeited that common right, and have been declared ineligible for that parliament, by a vote of the house of commons; or for law, by an act of the legislature. But it was an constitutional prohibition, which was grounded on an ordinance of the house of lords, and issued in the king's writs, for the parliament holding at Coventry, 6 Hen. IV. that no apprentice or other man of the law should be elected a knight of the shire therein: in return for which, our books and historians have branded this parliament with the name of *parliamentum indecensum*, or the lack-learning parliament; and Sir Edward Coke observes with some spleen, that there was never a good law made thereat.

ELECTION LAWS RESPECTING THE METHOD OF PROCEEDING. The 3d point, regard elections, is the method of proceeding there. This is also regulated by the law of parliament, and by various statutes, all of which we shall bind together, and extract out of them a summary account of the method of proceeding to election. As soon as the parliament is summoned, the lord chancellor, (or if a vacancy happens during the sitting of parliament, the speaker, by order of the house, and without such order if a vacancy happens by death in the time of a recess upwards of 20 days) sends his warrant to the clerk of the crown in chancery; who thereupon sends out writs to the sheriff of every county, for the election of all the members to serve for that county, and every city and borough therein. Within three days after the receipt of this writ, the sheriff is to send his precept, under his seal, to the proper returning officers of the cities and boroughs, commanding them to elect their members; and the said returning officers are to proceed to election within eight days from the receipt of the precept, giving four days notice of the election; and to return the persons chosen, together with the precept, to the sheriff. But elections of knights of the shire must be proceeded to by the sheriff himself in person, at the next county-court that shall happen after the delivery of the writ. The county court is a court held every month or oftener by the sheriff, intended to try civil causes not exceeding the value of 40s. in that part of the county he pleases to appoint for that purpose; but for the election of knights of the shire, it must be held at the most usual place. If the county-court falls upon the day of delivering the writ, or within six days after, the sheriff may adjourn the court and election to some other convenient time, not longer than 16 days, nor shorter than 10; but he cannot alter the place, without the consent of all the candidates: and, in all such cases, 10 days public notice must be given of the time and place of the election. And, as it is essential to the very being of parliament that

elections should be absolutely free, therefore all undue influences upon the electors are illegal, and strongly prohibited. For Mr Locke ranks it among those breaches of trust in the executive magistrate, which, according to his notions, amount to a dissolution of the government, "if he employs the force, treasure, and offices of the society to corrupt the representatives, or openly to pre-engage the electors, and prescribe what manner of persons shall be chosen: For thus to regulate candidates and electors, and new-model the ways of election, what is it (says he) but to cut up the government by the roots and poison the very fountain of public security?" As soon, therefore, as the time and place of election, either in counties or boroughs, are fixed, all soldiers quartered in the place are to remove, at least one day before the election, to the distance of two miles or more; and not to return till one day after the poll is ended. Riots likewise have been frequently determined to make an election void. By vote also of the house of commons, to whom alone belongs the power of determining contested elections, no lord of parliament, or lord lieutenant of a county, hath any right to interfere in the election of commons; and, by statute, the lord warden of the cinque-ports shall not recommend any members there. If any officer of the excise, customs, stamps, or certain other branches of the revenue, presumes to intermeddle in elections, by persuading any voter or dissuading him, he forfeits L. 100, and is disabled to hold any office. Thus are the electors of one branch of the legislature secured from any undue influence from either of the other two, and from all external violence and compulsion. But the greatest danger is that in which themselves co-operate by the infamous practice of bribery and corruption. To prevent which it is enacted, that no candidate shall, after the date (usually called the *teste*) of the writs, or after the vacancy, give any money or entertainment to his electors, or promise to give any, either to particular persons, or to the place in general, in order to his being elected, on pain of being incapable to serve for that place in parliament. And if any money, gift, office, employment, or reward be given, or promised to be given, to any voter, at any time, in order to influence him to give or withhold his vote, as well he that takes as he that offers such bribe forfeits L. 500, and is forever disabled from voting and holding any office in any corporation; unless, before conviction, he will discover some other offender of the same kind, and then he is indemnified for his own offence. The first instance that occurs of election bribery, was so early as 13 Eliz. when one Thomas Longe (being a simple man, and of small capacity to serve in parliament) acknowledged that he had given the returning officer and others of the borough for which he was chosen four pounds to be returned member, and was for that premium elected. But for this offence the borough was amerced, the member was removed, and the officer fined and imprisoned. But as this practice hath since taken much deeper and more universal root, it hath occasioned the making of these wholesome statutes; to complete the efficacy of which, there is nothing wanting but resolu-

tion and integrity to put them in strict execution. Under influence being thus guarded against, the election is to be proceeded to on the day appointed; the sheriff or other returning officer first taking an oath against bribery, and, for the due execution of his office. The candidates likewise, if required, must swear to their qualification, and the electors in counties to theirs; and the electors both in counties and boroughs are also compellable to take the oath of abjuration, and that against bribery and corruption. And it might not be amiss, if the members elected were bound to take the latter oath as well as the former; which, in all probability would be much more effectual than administering it only to the electors. The election being closed, the returning officer in boroughs return his precepts to the sheriff, with the persons elected by the majority: and the sheriff returns the whole, together with the writ for the county and the knights elected thereupon, to the clerk of the crown in chancery: before the day of meeting, if it be a new parliament, or within 14 days after the election, if it be an occasional vacancy; and this under penalty of £.500. If the sheriff does not return such knights only as are duly elected, he forfeits, by the old statutes of Henry VI. £.100; and the returning officer in boroughs, for a like false return, £.400: and they are besides liable to an action, in which double damages shall be recovered, by the later statutes of king William; and any person bribing the returning officer shall also forfeit £.3000. But the members returned by him are the sitting members, until the house of commons, upon petition, shall adjudge the return to be false and illegal. The form and manner of proceeding upon such petition are now regulated by statute 10 Geo. III. c. 16 (amended by 11 Geo. III. c. 42.) and made perpetual by 14 Geo. III. c. 15; which directs the method of choosing by lot a select committee of 15 members, who are sworn well and truly to try the same, and a true judgment to give, according to the evidence.

(ii.) **ELECTION OF ECCLESIASTICAL PERSONS.** Elections for the dignities of the church ought to be free, according to the stat. 9 Ed. II. cap. 14. If any persons, that have a voice in elections, take any reward for an election in any church, college, school, &c. the election shall be void. And if any persons of such societies resign their places to others for reward, they incur a forfeiture of double the sum; and both the parties are rendered incapable of the place: Stat. 1 Eliz. cap. 6.

(iii.) **ELECTION OF SCOTS PEERS.** See PEERS.

(iv.) **ELECTION OF VERDERS OF THE FOREST.** *Electio veridariusum foreste*, in law, a writ that lies for the choice of a verdor, where any of the verdors of the forest are dead, or removed from their offices. This writ is directed to the sheriff, and the verdor is to be elected by his freeholders of the county, in the same manner as coroners. *New Nat. Brew.* 366.

(1.) * **ELECTIVE.** *adj.* [from *elect.*] 1. Regulated or bestowed by election or choice.—I will say positively and resolutely, that it is impossible an elective monarchy should be so free and absolute as an hereditary. *Bacon.*—The last change of their government, from elective to hereditary, has

made it seem hitherto of less force, and unjust for action abroad. *Temple.*—Exerting the power of choice.—To talk of compelling a man to be good, is a contradiction; for where there is force there can be no choice:—whence all moral governments consisteth in the elective act of the understanding will. *Greus's Cosmologia Sacra.*

(2.) **ELECTIVE ATTRACTION.** See CHEMISTRY. *Index.*

* **ELECTIVELY.** *adv.* [from *elect.*] By choice with preference of one to another.—How or what should have such an influence upon the ignis, as to drive them into those muscles, *electricity*, I am not subtle enough to discern. *Ray on Creation.*—They work not *electively*, or upon posposing to themselves an end of their operation *Greus.*

(1.) * **ELECTOR.** *n. s.* [from *elect.*] 1. He that has a vote in the choice of any officer.—

From the new world her silver and her gold Came, like a tempest, to confound the old; Feeding with these the brij'd electors' hopes, Alope she gave us emperors and popes. *Waller.* 2. A prince who has a voice in the choice of a German emperor.

(2.) **ELECTOR.** See ELECTION. § II. 1.

(3.) **ELECTOR,** in the German polity, is particularly, and by way of eminence, applied to those princes, who have the right of electing the emperor; who are all sovereign princes, and the principal members of the empire. The **ELECTORAL COLLEGE**, consisting of all the electors of the empire, is the most illustrious and august body in Europe. Bellarmine, Baronius, the canonists and most other historians, attribute the institution of it to pope Gregory V. and the emperor Otto III. in the 10th century; however, the number of electors was settled, at least, till the 13th century. In 1356 Charles IV. by the golden bull, fixed the number of electors to 7; viz. 3 ecclesiastics, the archbishops of Mentz, Treves, and Cologne; and 4 seculars, viz. the king of Bohemia, count Palatine of the Rhine, duke of Saxony and marquis of Brandenburg. In 1648 this order was changed, the duke of Bavaria being put in the place of the count Palatine, who, having accepted the crown of Bohemia, was outlawed by the emperor; but being at length restored, a eighth electorate was erected for the duke of Bavaria. In 1692, a ninth electorate was created, by the emperor Leopold I. in favour of the duke of Hanover, of the house of Brunswick Lunenburg. There is this difference, between the secular and ecclesiastical electors, that the first have an active and passive voice, that is, may choose and be chosen; the last, an active only. The 3 archbishops must be 30 years old, before they can be advanced to the dignity; the seculars, 18, before they can perform the office themselves. These last have each their vicars, who officiate in their absence. Besides the power of choosing an emperor, the electors have also that of capitulating with and deposing him; so that, if there be any one suffrage wanting, a protest may be entered against the proceedings. By the right of capitulation, they attribute to themselves great privileges, as making of war, coining, and taking care of the public interest and security of the states; and the emperor promises,

... upon oath, to receive the empire upon conditions. The electors have precedence over other princes of the empire, even of cardinals and kings; and are addressed by the title of *electors*. Their several functions are as follows. The elector of Mentz is *chancellor of Germany*, convokes the states, and gives his vote before any of the rest. The elector of Cologne is *chancellor of Italy*, and consecrates the emperor. The elector of Treves is *chancellor of the Rhine*, and confers imposition of hands upon the emperor. The count Palatine of the Rhine is *treasurer of the empire*, and presents the emperor with a globe at his coronation. The elector of Bavaria is *great master of the imperial palace*, carries the golden apple. The marquis of Brandenburg is *grand chamberlain*, and puts the sceptre in the emperor's finger. The elector of Saxony is *grand marshal*, and gives the word to the emperor. The king of Bohemia is *grand butler*, puts Charlemagne's crown on the emperor's head. Lastly, the elector of Hanover, now king of Great Britain, is *arch-treasurer*, though when instituted the title was *standard-bearer*, of the *Roman empire*.

ELECTORAL. *adj.* [from *elector*.] Having the dignity of an elector.

ELECTORAL COLLEGE. See **ELECTOR**, § 3.

ELECTORATE. *n. f.* [from *elector*.] The office of an elector.—He has a great advantage for his son-in-law; and can himself choose when he pleases, the whole strength of the empire. *Addison's Freeholder*.

ELECTORATE. See **ELECTOR**, § 3.

ELECTRA. In the pagan mythology, one of the daughters of Atlas and Pleione, who were said to have been changed into the constellation. She was the mother of Dardanus, the first king of Troy, by Jupiter; and according to Hyginus, withdrew her sight upon the fall of Troy.

***ELECTRE.** *n. f.* [*electrum*, Lat.] 1. Amber; which, having the quality when warmed by friction of attracting bodies, gave to one species of attraction the name of *electricity*, and to the bodies that so attract the epithet *electric*. 2. A mixed metal.—Change silver plate or vessel into the compound stuff, being a kind of silver *electre*, and turn the rest into coin. *Bacon*.

(1.) ***ELECTRICAL.** **ELECTRICK.** *adj.* [from *electrum*.] See **ELECTRE**. 1. Attractive without magnetism; attractive by a peculiar property, supposed once to belong chiefly to amber.—By *electric* bodies do I conceive not such only as take up light bodies, in which number the ancients only placed jet and amber; but such as, conveniently placed, attract all bodies palpable. *Brown's Vulgar Errors*.—An *electric* body can by friction, emit an exhalation so subtle, and yet so potent, as by its emission to cause no sensible diminution of the weight of the *electric* body, and to be expanded through a sphere, whose diameter is above two feet, and yet to be able to carry up lead, copper, or leaf gold, at the distance of above a foot from the *electric* body. *Newton*. 2. Produced by an *electric* body.—If that attraction were not, rather *electric* than magnetical, it was wondrous what Helmont delivereth concerning a glass, wherein the magistry of loadstone was prepared, which retained an attractive quality, *Brown*.—If a piece of white paper, or a white cloth, or the end of one's finger, be held at about a quarter of an inch from the glass, the *electric* vapour, excited by friction, will, by dashing against the white paper, cloth, or finger, be put into such an agitation as to emit light. *Newton's Opticks*.

(2.) **ELECTRICAL STONE.** See **ELECTRICITY**, *Index*, and **TOURMALIN**.

ELECTRICIAN. *n. f.* One who makes electrical experiments, and endeavours to investigate the nature, causes, and effects of electricity.

ELECTRICITY.

INTRODUCTION.

ART. I. DEFINITIONS of ELECTRICITY.

ELECTRICITY. *n. f.* [from *electric*.] See **ELECTRE**.] A property in some bodies, whereby, when rubbed so as to grow dry, they draw little bits of paper, or such like things to them. *Quincy*.

Such (says Dr. Johnson) was the account of a few years ago of electricity; but the industry of the present age, first excited by the experiments of *Grey*, has discovered in electricity a number of philosophical wonders. Bodies electrified by a sphere of glass turned nimbly round, not only emit flame, but may be filled with such quantity of the electrical vapour, as, if discharged once upon a human body, would endanger life. The force of this vapour has hitherto appeared instantaneous, persons at both ends of a chain seeming to be struck at once. The

philosophers are now endeavouring to intercept the strokes of lightning.

(3.) Mr *JAMES TYTLER*, chemist, who was well acquainted with both the theory and practice of electricity, gives the following definition of it, in the last edition of the *Encyclopædia Britannica*:

(4.) "ELECTRICITY, in general, signifies the operations of a very subtle fluid, in most cases invisible, but which sometimes becomes the object of our sight and other senses, discovering itself to be one of the chief agents employed in producing the phenomena of nature."

(5.) *TIBERIUS CAVALLIO*, F. R. S. who has published a Complete Treatise on the subject, in 3 vols 8vo, and from whose work, a part of the present treatise is extracted, gives no other definition of Electricity, except styling it the "unknown cause of those effects called *electrical appearances*."

(6.) Perhaps the only proper definition that can

be given of ELECTRICITY, as a *branch of Science*, is to stile it,—That part of natural philosophy, which proposes to investigate the nature and effects of that subtle fluid, which seems to pervade the whole material world, and to be a principal agent in most of the operations of nature.

SECT. II. HISTORY of ELECTRICITY.

(7.) Although the ELECTRICAL FLUID, ever since the creation, has had the same share in all the operations of nature, that it has at present, yet the discovery of its action, and even of its existence, is of a very late date. THALES the Milesian, who lived about A. A. C. 600 was the first that observed the electrical properties of amber. Of these, indeed, he knew no more than that this substance would attract light bodies when it was rubbed. The ancient naturalist THEOPHRASTUS, who flourished 300 years later, tells us, that the *hyacurium* (now called the *tourmalin*), has the property of attracting light bodies, as well as amber.

(8.) From this time, there is a chasm in the history of electricity for no less than 1900 years. Indeed, it is scarce to be supposed, that during this long interval any person applied himself to the investigation of the subject; as, for the greatest part of it, science of every kind was almost totally extinguished. The electrical properties of jet, however, and, according to Mr Boze, of the agate, were some way or other discovered during this period. But it was not till the beginning of the 17th century, that electricity became properly a distinct science, and the foundation was laid of those discoveries which have since taken place.

(9.) Dr WILLIAM GILBERT, an English physician, who, in 1600, wrote a book of *Magnete*, containing various electrical experiments, was the first who properly merits the title of an *Electrician*. He, like his predecessors, however, considered only the attractive property of electric substances. Dr Gilbert's merit consists in his having been at great pains to find out a number of such substances, and thus considerably enlarging the number of electrics; on which account M. Cavallo says, "he may be justly deemed the FATHER of the present electricity."

(10.) SIR FRANCIS BACON also made some electrical experiments; but no farther discoveries appear to have been made till 1670, except some trifling additions to the catalogue of electrics. About this time, Mr BOYLE applied himself to the study of electricity: He enlarged the catalogue of electrics; and found that their electric properties were increased by wiping and warming them before they were rubbed. He observed also, that all kinds of bodies were attracted promiscuously; and imagined that they were attracted *in vacuo* as well as in air. This last position, however, is denied by Mr BECCARIA; and Mr Boyle must have been mistaken. He also observed the electric light, though only in the instance of some diamonds.

(11.) The science, however, was much farther improved by OTTO GUERICKE, who was contemporary with Mr Boyle. He made use of a sulphur globe, whirled on an axis much in the same way with our present glass globes. Thus he could excite a vastly greater power of electricity than any of his predecessors, and try all their experiments

to much more advantage. He discovered ELECTRIC REPULSION; and not only saw the electric light more clearly than Mr Boyle, but heard the hissing sound with which it is emitted. He made another remarkable discovery, but which has since been very generally overlooked; namely, that a feather, when repelled by an electric, always keeps the same face towards the body which repels it, as the moon does to the earth.

(12.) The celebrated Sir ISAAC NEWTON was the next discovery of any moment; by observing that the electric attraction and repulsion passed through glass; and it is much to be regretted that this accurate philosopher did not apply himself to the study of electricity with greater assiduity.

(13.) *A Treatise on Electricity* was published 1709, by Mr HAWKESBEE; who not only surpassed all his predecessors and contemporaries, also made some discoveries which well deserve the attention of the most expert electricians at day. Besides many new experiments upon electric attraction and repulsion, as well as the light excited by electric bodies; he found a method of rendering opaque bodies transparent by electricity. He lined more than half the inside of a glass with sealing-wax; and having exhausted the air, he put it in motion; when applying his hand to excite it, he saw the shape and figure of all parts of his hand distinctly and perfectly, on the concave superficies of the wax within, just as if only pure glass without any wax at all had been interposed between his eye and his hand. The lining of wax, where it was spread thinnest, did but just allow the light of a candle through the dark; but in some places the wax was at an eighth part of an inch thick. Yet, even in these places, the light and figure of his hand were distinguishable through it as any where else. The sealing wax did not adhere to the glass in all places; but this made no difference with regard to the transparency. Pitch answered the purpose equally well with sealing wax. Mr Hawkesbee also made a farther improvement, by using a globe, which acts much more powerfully than the sulphur one.

(14.) After the death of Mr Hawkesbee, the science of electricity," (says M. Cavallo), "never hitherto advanced, remained for about 20 years in a state of quiescence, the attention of philosophers being at that time engaged in other philosophical subjects, which on account of the discoveries of the incomparable Sir ISAAC NEWTON were then greatly in repute. Mr GRAY the first, after this period of oblivion to bring the science again to light. He by his great discoveries re-introduced it to the acquaintance of philosophers, and from him the true flourishing of electricity may be said to take its date."

(15.) Mr Stephen GRAY's capital discovery was the distinction between CONDUCTORS and NON-CONDUCTORS of electricity. In Feb. 1729, Mr Gray, after some fruitless attempts to excite electric power in metals, recollected a suspicion that had for some time entertained, that as a glass when excited in the dark, communicated its electricity to various bodies, it might at the same time communicate to them a power of attracting the bodies

which, as yet, was all that was understood by the word *electricity*. For this purpose he used a glass tube, 3 feet 5 inches long, and one inch and two tenths in diameter. To the end he fitted a cork, to keep out the dust the tube was not used.

(6.) Mr GAAY's first experiments were made to determine whether the tube would attract electricity well with the ends shut as with them open. In this respect there was no difference; but he found that the corks attracted and repelled light bodies as well, and rather better, than the itself. He then fixed an ivory ball upon a stick about four inches long, and thrusting the end of the stalk into one of the corks, he held the ball endowed with a strong attractive or repulsive virtue. This experiment he repeated in many different ways; fixing the ball upon sticks, and upon pieces of brass and iron always with the same success; but he concluded, that the ball at the end attracted more vigorously than that part of the wire nearest the end.

(7.) Mr Grey next tried whether the ball could be suspended by a pack-thread with a loop at the end, and the event fully answered his expectation. Having thus suspended bodies of the length he conveniently could, he ascended a ladder 26 feet high, and fastening a string to the top, found that the ball would attract light bodies to the ground below. This experiment was in the greatest heights to which he could ascend, he next attempted to carry the electricity horizontally; but in this he failed, because he could not keep his line, which was intended to carry the electricity horizontally, by a pack-thread; thus the fluid got off from it. Whereupon he consulted Mr Wheeler and told him of the unsuccessful attempt he had made.

(8.) Mr WHEELER proposed to suspend the conducting line by silk instead of pack thread, as silk is smaller than the other. With this they succeeded perfectly well, but by repeated experiments Mr Grey discovered that the silk refused to conduct the electric fluid, not on account of its smallness, as they had supposed, but on account of the difference in the matter. The wires were better than the silk thread, yet the electricity was easily carried off by them.

(9.) This discovery of the non-conducting power of silk was made in the beginning of July 1729, and was quickly followed by another, viz. that the same power existed in many other substances: thus, in fact, the foundation of almost all the subsequent improvements in electricity was laid. Mr Grey continued to study electricity as long as he lived; and has given a set of experiments, of which Dr Pricley says, "It is not easy to know what to make of them." He imagined that he had discovered in all electric substances a perpetual power, which required no kind of excitation, either by heating, rubbing, or any kind of action. He took 19 different substances, which were either resins, gum lac, shell lac, bees wax, pitch, or two or three of these different compounds. With these he made a variety of experiments, several of which are similar to

those which have been since repeated, and published as new discoveries, by other persons.

(10.) Mr Grey also made some experiments, with regard to the attraction of electric bodies in *vacuo*; and in this he determined with Mr Boyle against the opinion of M. Beccaria. But the most remarkable experiments mentioned by Mr Grey, are his imitations of the planetary motions. "I have lately made (says he) several new experiments upon the projectile and pendulous motions of small bodies by electricity; by which small bodies may be made to move about large ones, either in circles or ellipses; and those either concentric or eccentric to the centre of the large body about which they move, so as to make many revolutions about them. And this motion will constantly be the same way that the planets move about the sun, viz. from the right hand to the left, or from W. to E. But these little planets, if I may so call them, move much faster in their apogee than in the perigee parts of their orbits; which is directly contrary to the motion of the planets about the sun."

(11.) The manner in which these experiments were made, as delivered by him on his death-bed to Dr MORTIMER, was as follows: "Place a small iron globe (said he), of an inch or an inch and an half in diameter, on the middle of a circular cake of resin, 7 or 8 inches in diameter, gently excited; and then a light body suspended by a very fine thread, 5 or 6 inches long, held in the hand over the centre of the cake, will, of itself, begin to move in a circle round the iron globe, and constantly from W. to E. If the globe is placed at any distance from the centre of the circular cake, it will describe an ellipse, which will have the same eccentricity as the distance of the globe from the centre of the cake. If the cake of resin be of an elliptical form, and the iron globe be placed in the centre of it, the light body will describe an elliptical orbit of the same eccentricity with the form of the cake. If the globe be placed in or near one of the foci of the elliptical cake, the light body will move much swifter in the apogee than in the perigee of its orbit. If the iron globe is fixed on a pedestal an inch from the table, and a glass hoop, or a portion of a hollow glass cylinder excited, be placed round it, the light body will move as in the circumstances mentioned above, and with the same varieties."

(12.) Mr Grey said likewise, that the light body would make the same revolutions, only smaller, round the iron globe placed on the bare table, without an electrical body to support it: but he acknowledged that he had not found the experiment succeed, if the thread was supported by any thing but a human hand, though he imagined any other animal substance would have answered the purpose. These experiments occasioned no small speculation. Dr Mortimer was the only person who said he had repeated them with success; but he failed in them when any other person was present. It was therefore supposed that both he and Mr Grey had been deceived. Mr Tytler thinks it probable that the success of Mr Grey and Dr Mortimer was owing to their having performed their

thely experiments with candle-light; and the failure of the others, to their having attempted them by day-light. Be this as it may, it is more than probable that Mr Grey has been deceived in many particulars; for no motion can be performed by an artificial excitation of the electric fluid, but what is attended with much irregularity.

(23.) Not long after Mr Grey's discovery of the difference between conductors and non-conductors, Mr DU FAY discovered the difference between *positive* and *negative*, or, as they were for some time, and are still by some called, the *VITREOUS* and *RESINOUS ELECTRICITIES*. This discovery was accidentally made in consequence of his observing, that a piece of leaf-gold, repelled by an excited glass tube, and which he meant to chase about the room with a piece of excited gum copal, instead of being repelled by it, as it was by the glass tube, was eagerly attracted. The same was the case with sealing wax, sulphur, rosin, and many other substances. He discovered also, that it was impossible to excite a tube in which the air was condensed.

(24.) Mr BOZE, professor of philosophy at Wittemburgh, re-introduced the use of glass globes; though some attribute this to CHRISTIAN AUGUSTUS HANSEN, professor of mathematics at Leipzig. He added also a prime conductor, which consisted of a tube of iron or tin. It was at first supported by a man standing upon cakes of rosin; but afterwards suspended by silk lines horizontally before the globe. A bundle of thread was put into the end next to the globe, which not only prevented any injury to the glass, but rendered the electricity stronger.

(25.) "The number of electricians," says M. Cavallo; "that hath been daily multiplying since Mr GREY, the discoveries made, and the use derived from those, till the present time, are matters really worthy of attention, and deserve to be admired by every lover of the sciences, and well-wisher of the human race.

(26.) "Whoever would make himself acquainted" (adds he) "with the particular transactions concerning those advances, should read the elaborate History of Electricity compiled by the learned Dr PRIESTLEY, a work that will inform him of whatever had been done relative to the subject till its publication.—I shall in general only observe, that although the science had, through the indefatigable attention of so many ingenious persons, and by the discoveries daily produced, excited the curiosity of philosophers, and engaged their attention; yet, as the causes of any thing, whether small or great, known or unknown, are seldom much attended to, if their effects are not striking and singular; so electricity had, till the year 1746, been studied by none but philosophers. Its attraction could in part be imitated by a load-stone; its light by a phosphorus; and, in short, nothing contributed to make electricity the subject of public attention, and excite a general curiosity, until the CAPITAL DISCOVERY of the vast accumulation of its power in what is commonly called the LEYDEN PHIAL, which was accidentally made in the memorable year 1745. Then, and not till then, the study of electricity became general, surprised every beholder, and invited to the houses

of electricians a greater number of spectators, than were before assembled together to behold any philosophical experiments whatever."

(27.) He adds in a note, "This great discovery was made by M. VAN KLEIST, dean of the thedral in Camin." The method of giving the electric shock, or the accumulation of the power of electricity in a phial, got its name of the *LEYDEN PHIAL*, from Mr CUNÆUS, a native of Leyden who exhibited it in repeating some experiments made by Messrs Muschenbroek and Allam professor in the university of that city.

(28.) M. VAN KLEIST sent the following account of his discovery to Dr LEIBERKUH at Lin. on the 4th Nov. 1745; "When a nail, or piece of thick brass wire, &c. is put into an apothecary's vial, and electrified, remarkable effects follow: but the vial must be very dry warm. I commonly rub it over before handling a finger, on which I put some pounded chalk a little mercury or a few drops of spirit of wine are put into it, the experiment succeeds better. As soon as this phial and nail are removed from the electrifying glass, or the prime conductor to which it hath been exposed is taken out, it throws out a pencil of flame so long, that this burning machine in my hand, I have taken above 60 steps in walking about my room. When it is electrified strongly, I can take it into any room, and there fire spirits of wine with it; while it is electrifying, I put my finger, or a piece of gold which I hold in my hand, to the neck of the vial, and receive a shock which stuns my arms and shoulders."

(29.) "A tin tube, or a man placed upon it, is electrified much stronger by this method than in the common way. When I present a vial and nail to a tin tube, which I have used long, nothing but experience can make me believe how strongly it is electrified. Two glasses have been broken by the shock of it."

(30.) Not long after this the following method of giving the shock was discovered in Holland by Mr CUNÆUS. Mr. MUSCHENBROEK and his friends, observing that electrified bodies exposed to the atmosphere, which is always replete with conducting particles of various kinds, lose their electricity, and were capable of retaining but a small quantity of it; imagined, that if the electrified bodies terminated on all the original electrics, they might be capable of receiving a stronger power and retaining it longer. Glass being the most convenient electric for this purpose, and water the most convenient non-conductor, they first made these experiments with water in glass bottles: but no considerable effect was made; till Mr Cunæus, happening to hold his glass vessel in one hand, and endeavouring to disengage it from the conductor with the other (when he imagined the water had received as much electricity as the machine could give it,) was surprised with a sudden shock in his arms and legs, which he had not in the least expected.

(31.) The report of such a terrible effect of electric power immediately raised the attention of all the philosophers in Europe. Many of them greatly exaggerated their accounts; either from natural timidity, or a love of the marvellous. MUSCHENBROEK, who tried the experiment

a very thin glass bowl, told M. Reaumur in a letter soon after the experiment, That he felt himself struck in his arms, shoulder, and breast, that he lost his breath; and was two days before he recovered from the effects of the blow, and the terror. He added, that he would not take a shock for the whole kingdom of France. Mr. LAMAND, who made the experiment with a common beer glass, said, that he lost his breath for some moments; and then felt such an intense pain along his right arm, that he was apprehensive of bad consequence, but it soon after went off without any inconvenience, &c. Other philosophers, on the contrary, showed their heroism and humanity, by receiving a number of electric shocks as strong as they could possibly make them. BOZE wished that he might die by the electric shock, in order to furnish, by his death, an article for the memoirs of the academy of sciences at Paris. "But," (adds Dr Priestley, from whom this story is taken,) *it is not given to every electrician to die in so glorious a manner, as the jolly and Richman.*" See § 40.

(32.) After this discovery, electricity became the great subject of conversation. Many persons all over Europe got their livelihood by exhibiting the phenomena of it; and, at the same time, the passion for the marvellous strongly discovered itself, in the effects of electricity, pretended to have been known in Italy and Germany. It was asserted by some electricians, at Venice, Bologna, Turin, &c. that if odoriferous substances were placed in glass vessels, and the vessels excited, the odours and other medicinal virtues would pass through the glass, infect the atmosphere around the conductor, and communicate the virtue to persons in contact with it; also, that those substances, held in the hand of persons electrified, could communicate their virtues to them; so that the medicines might be made to operate without being taken into the stomach. They even pretended to have wrought many cures by the help of electricity applied in this way.

(33.) To satisfy himself of the wonderful effects of the medicated tubes, as they were called, Mr. BOZE travelled into Italy, where he visited all the gentlemen who had published any account of the experiments. But though he engaged them to repeat their experiments in his presence, and on himself, and though he made it his business to get all the information he could concerning them, he returned fully convinced, that in no instance had odours been found to transpire through the pores of excited glass, and that no drugs had communicated their virtues to people who only held them in their hands while they were electrified. He was convinced, however, that by means of electrification without drugs, several persons had found considerable relief in various disorders; particularly, that a paralytic person was cured at Geneva, and that one who was deaf of an ear, another who had a violent pain in the head, and a woman with a disorder in her womb, had been cured at Bologna; so that from these we may date the introduction of electricity into the medicinal art. See MEDICINE, Index.

(34.) The BEATIFICATION of Mr BOZE, was

another wonderful experiment, which other electricians endeavoured to repeat after him, but to no purpose. He asserted, that if, in electrifying, large globes were employed, and the electrified person stood upon large cakes of pitch, a luminous flame would by degrees arise from the pitch, and spread itself around his feet; that from thence it would be propagated to his knees and body, till at last it ascended to his head; that then, by continuing the electrification, the person's head would be surrounded by a glory, such as is represented by painters in ornamenting the heads of saints. Dr WARSON took the utmost pains to repeat this experiment. He underwent the operation several times, and was supported during the time of it by solid electricities three feet high. Being electrified very strongly, he felt a kind of tingling on the skin of his head and in many other parts of his body. The sensation resembled what would arise from a vast number of insects crawling over him at the same time. He constantly observed the sensation to be greatest in those parts of his body which were nearest to any non-electric; but no light appeared upon his head, though the experiment was several times made in the dark, and with some continuance. At last the Doctor wrote to Mr BOZE himself, and his answer showed that the whole had been a trick. Mr BOZE acknowledged that he had made use of a suit of armour, which was decked with many buttons of steel, some pointed like nails, others like wedges, and some pyramidal; and that when the electrization was very vigorous, the edges of the helmet would dart forth rays something like those which are painted on the heads of saints.

(35.) One of the most important discoveries yet made in electricity is the identity of the electric fluid with LIGHTNING. It has been of more practical use to mankind than any other. From almost the first discovery of the electric light, and the crackling with which it is emitted, a similarity between it and the phenomena of thunder and lightning had been observed. This is taken notice of by Dr WALL, one of the first who viewed the electric light in any perfect manner. The Abbé NOLLET, Mr WINCKLER, and others, also enumerated many resemblances between the phenomena of electricity and those of thunder; but they did not think of any method by which their suppositions could be brought to the test of experience.

(36.) This was first proposed by Dr FRANKLIN in 1750. He had before discovered the effects of pointed bodies in drawing off the electric matter more powerfully than others. This was suggested to him by one Mr Thomas Hopkinson, who electrified an iron ball of 3 or 4 inches diameter with a needle fastened to it, expecting to draw a stronger spark from the point of it; but was surprised to find little or none. Dr Franklin, improving on this hint, supposed that pointed rods of iron, fixed in the air when the atmosphere was loaded with lightning, might draw from it the matter of the thunder bolt, without noise or danger, into the body of the earth. "The electric fluid (said he) is attracted by points. We do not know whether this property be in lightning; but since they agree in all the particulars in which we

can already compare them, it is not improbable, that they agree likewise in this; let the experiment be made."

(37.) Dr FRANKLIN's supposition was verified in 1752, and the discovery is almost the only one in the whole science, that has not been the result of accident. The most active persons were two French gentlemen, Messrs DALIBARD and DELOR. The former prepared his apparatus at Marly la Ville, 5 or 6 leagues from Paris; the latter at his own house, on some of the highest ground in that capital. M. Dalibard's machine consisted of an iron rod 40 feet long, the lower extremity of which was brought into a centry-box, where the rain could not come; while on the outside it was fastened to three wooden posts by long silken strings defended from the rain. This machine was the first that was favoured with a visit of the ETHERIAL FIRE. Mr Dalibard himself was not at home; but, in his absence, he had entrusted the care of his apparatus to one COISSIER a joiner, who had served 14 years among the dragoons, and on whose courage and understanding he could depend. This artisan had all the necessary instructions given him; and was desired to call some of his neighbours, particularly the curate of the parish, whenever there should be any appearance of a thunder storm. At length the long expected event arrived. On Wednesday, 10th May, 1752, between 2 and 3 P. M. Coissier heard a pretty loud clap of thunder. Immediately he ran to the machine, taking with him a phial furnished with a brass wire; and presenting the wire to the end of the rod, a small spark issued from it with a snap like that which attends a spark from an electrified conductor. Stronger sparks were afterwards drawn in the presence of the curate and a number of other people. The curate's account of them was, that they were of a blue colour, an inch and an half in length, and smelled strongly of sulphur. In making them, he received a stroke on his arm a little below the elbow; but he could not tell whether it came from the brass wire inserted into the phial, or from the bar. He did not attend to it at the time; but the pain continuing, he uncovered his arm when he went home in the presence of Coissier. A mark was perceived round it, such as might have been made by a blow with the wire on his naked skin.

(38.) Dr FRANKLIN himself had an opportunity, about a month after this, of verifying his own hypothesis. He was waiting for the erection of a spire in Philadelphia, not imagining that a pointed rod of a moderate height could answer the purpose. At last it occurred to him, that by means of a common KITE he could have a readier access to the higher regions of the atmosphere than any other way whatever. Preparing, therefore, a large silk handkerchief and two cross sticks of a proper length on which to extend it, he took the opportunity of the first approaching thunder storm to take a walk into a field where there was a shed convenient for his purpose. But dreading the ridicule which too commonly attends unsuccessful attempts in science, he communicated his intention to nobody but his son, who assisted him in raising the kite. A considerable time elapsed before there was any appearance of success. One

very promising cloud had passed over the KITE without any effect; when, just as he was beginning to despair, he observed some loose threads of the hempen string to stand erect and avoid one another, just as if they had been suspended by a conductor of a common electrical machine. This he presented his knuckle to a key which was fastened to the string, and thus obtained an evident electric spark. Others succeeded even before the string was wet; but when the rain began to descend, he collected electric fire prodigiously. He had afterwards an insulated rod to draw the lightning into his house; and formed almost every experiment with real lightning, that had before been done with the artificial representations of it by electrical machines.

(39.) A new and extensive field was thus opened for philosophers; but it was soon found, experiments of this kind were attended with danger. In 1752, the Abbe Nollet published cautions to those who tried experiments on lightning. He had been informed by letters from France and Bologna, that some persons in those places had received violent shocks, while they drew sparks from an iron bar electrified by lightning. A correspondent informed him, that as he was endeavouring to fasten a small chain with a copper ball to one of its extremities, a great chain which communicated with the top of the building, there came a flash of lightning which he did not see, but which affected the chain with a noise like that of wild-fire. The servant instantly received such a shock, that he fell out of his hands, and he was struck back 4 or 5 paces.

(40.) But the most melancholy proof of the danger of these experiments, was the death of the professor RICHMAN, at Petersburg. This happened on the 6th Aug. 1753, as he was making experiments on lightning drawn into his own room. He had provided himself with an instrument for measuring the quantity of electricity communicated to his apparatus; and as he stood with his head inclined to it, Mr SOLOKOW an engineer who was near him, observed a globe of blue as big as his fist, jump from the instrument, which was about a foot distant, to Mr Richman's head. The professor was instantly dead, and Mr Solokow was also much hurt. The latter, however, gave no particular account of the way in which he was affected; for, at the time the professor was struck, there arose a sort of steam or vapour which entirely benumbed him, and made him fall down to the ground; so that he could not remember to have heard the clap of thunder which was a very loud one. The globe of fire was attended with an explosion like that of a pistol; the instrument for measuring the electricity (called by the professor an *electrical gnomon*), broken to pieces, and the fragments thrown about the room. Upon examining the effects of the lightning in the professor's chamber, they found the door-case half split through, and the door torn off and thrown into the room.

(41.) A vein was opened in the body twice, but no blood followed; after which, they endeavoured to recover life by violent friction, but in vain upon turning the corpse with the face downwards.

during the rubbing, an inconsiderable quantity of blood ran out of the mouth. There appeared a red spot on the forehead, from which spirted some drops of blood through the pores, without wounding the skin. The shoe belonging to the left foot was burst open, and uncovering the foot at that part, they found a blue mark; whence it was concluded, that the electric matter having entered at the head, made its way out again at that foot. Upon the body, particularly on the left side, were several red and blue spots resembling others struck by being burnt. Many more also were visible over the whole body, and particularly over the back. That upon the forehead changed to a brownish red, but the hair of the head was not singed. In the place where the shoe was unstrapped, the stocking was entire; as was the rest every where, the waistcoat only being singed at the fore flap where it joined the hinder: but it appeared on the back of Mr Solokow's coat narrow streaks, as if red-hot wires had burnt off the nap, and which could not well be accounted for.

(43.) Next day, when the professor's body was opened, the cranium was very entire, having neither fissure nor contra-fissure: the brain was sound; but the transparent pellicles of the windings were excessively tender, and easily rent. There was some extravasated blood in it, as also in the cavities below the lungs. Those of the brain were quite sound; but those towards the back of a brownish black colour, and filled with some of the blood above mentioned. The throat, lungs, and the small intestines, were all injured. The singed leather-coloured spots penetrated the skin only. In 48 hours the body was much corrupted that they could scarce get it into a coffin.

(44.) Since the discovery of the identity of lightning and the electric matter, long rods of iron or other metal have been made use of with a view to protect buildings from the danger of strokes of lightning. A considerable dispute has been carried on whether these rods ought to be pointed or not; but a committee of the Royal Society lately determined it in favour of the former.

(45.) We shall conclude our history of electricity with the words of M. Cavallo: "Since the time of this discovery," (of the *Leyden Pibal*), "the prodigious number of electricians, experiments, and facts that have been daily produced from every corner of Europe, and other parts of the world, is almost incredible. Discoveries crowded upon discoveries; improvements upon improvements; and the science ever since that time went on with so rapid a course, and is now spreading so amazingly fast, that it seems as if the subject would be soon exhausted, and electricians arrive at an end of their researches: but, however, the *vis ultra* is, in all probability, as yet at a great distance, and the young electrician has a vast field before him, highly deserving his attention, and promising further discoveries, perhaps equally, or more important than those already made."

SECT. III. Of the STUDY of ELECTRICITY, and the GENERAL PLAN of THIS TREATISE.

(46.) "Electricity, (says M. Cavallo, in the In-

troduction to his *Complete Treatise* on that science), is one of the most pleasing and surprising among all the branches of natural philosophy, that ever were cultivated by man.—Optics, indeed, shews many enchanting and useful properties, but concerning vision only; magnetism exhibits the force of attraction, repulsion, and polarity in that substance called a magnet: but electricity, containing, as it were, all within its power, alone exhibits the effects of many sciences, combines together different powers, and, by striking the senses in a particular and surprising manner, affords pleasure, and is of use to the ignorant as well as the philosopher, the rich as well as the poor. In electricity, we are pleased with beholding its penetrating light, exhibited in numberless different forms; we admire its attraction and repulsion, acting upon every kind of body; we are surprised by the shock, terrified by the explosion and force of its battery; but when we consider and examine it as the cause of thunder, lightning, aurora borealis, and other appearances of nature, whose direful effects we can in part imitate, explain, and even avert, we are then involved in a maze, that leaves nothing to contemplate but the inexpressible and permanent idea of admiration and wonder."

(46.) In the prosecution of this useful study, our design is to lay before the reader, a comprehensive view of the present state of ELECTRICITY, in as small a compass as the nature of the science will admit, and at the same time as extensive, as the limits of our work will allow; by giving,

(47.) I. A view of the general LAWS and PRINCIPLES of electricity, which have been confirmed by experience.

(48.) II. An account of the most probable THEORY of electricity.

(49.) III. An account of the PRACTICE of electricity, with a view of the principal experiments and apparatus of the most eminent electricians.

(50.) IV. A brief view of MEDICAL ELECTRICITY; and,

(51.) V. An account of the important discovery lately made, respecting that new and wonderful branch of our subject, called ANIMAL ELECTRICITY.

PART I.

LAWS AND PRINCIPLES OF ELECTRICITY.

SECT. I. EXPLANATION of TERMS.

(52.) Our first business in entering upon the science of electricity, is to give a brief explanation and illustration of the terms principally used in it.

(53.) ELECTRICAL APPEARANCES. It has been known for ages, that amber, jet, and some other bodies, when rubbed, attract and repel light bodies, as hairs, feathers, down, dust, &c. In more modern times, it was discovered, that several other substances had the same properties in a high degree; that glass, resinous substances, silk, dry wood, &c. have the same properties; and that any of these, when dry, and rubbed for a short time, would attract light substances very readily. When we rub a stick of sealing wax with soft flannel, it attracts any light substances, as hairs, feathers, &c. that are brought under it. If we rub

a glass tube with dry silk, or with the hand, (if clean and dry,) it produces the same effect. On darkening the room, and rubbing the glass tube again, sparks of fire will follow the hand; present a finger to the tube, at the distance of half an inch, and these sparks will be formed into PENCILS or brushes of light, attended with a snapping noise. The friction, in these instances, manifests to the senses the existence of a substance that was before invisible or imperceptible. The attraction, repulsion, sparking, &c. are termed **SIGNS OF ELECTRICITY, OR ELECTRICAL APPEARANCES.**

(54.) **ELECTRICS.** The glass tube, used in the above experiment, is called the *electric*; and all bodies capable of producing similar effects are called *electrics*, and frequently *electrics per se*.

(55.) **RUBBERS.** The dry silk, in the above experiment, the hand, or any other body that rubs an electric, is termed the *rubber*. The rubber makes an essential part of the construction of an electrical machine.

(56.) **EXCITATION.** Those electric bodies, which by rubbing are made to exhibit electrical appearances, are said to be *excited* by the friction or rubbing.

(57.) **CONDUCTORS.** If a metallic wire of any length be fixed to the end of the glass tube, and a ball of metal be suspended at the end of the wire, upon exciting the tube by rubbing, the electric virtue will pass through the wire to the ball, which will thus acquire all the properties of the excited glass tube, so as to exhibit the same electrical appearances of attraction, repulsion, sparking, &c. The wire in this case, is therefore styled a *conductor*, and all bodies, capable of transmitting the electric virtue in a similar manner, are hence styled *conductors*.

(58.) **NON-CONDUCTORS.** If, on the other hand, we should make use of a silk string, in the above experiment, instead of the wire, the metallic ball, upon exciting the glass tube, will exhibit no signs of electricity: For the silk string will not allow the electric virtue to be transmitted to the ball. Hence silk and all similar substances which do not permit the electric virtue to pass through them are styled *non-conductors*. All *electrics* are therefore *non-conductors*, whence the terms are synonymous.

(59.) **NON-ELECTRICS.** By parity of analogy all *conductors* are called *non-electrics*, and these terms are likewise used synonymously; because they cannot be excited, as will be further illustrated in the next section.

(60.) **INSULATION.** When a body is placed entirely upon non-conductors, it is said to be *insulated*. In the preceding experiment, the ball was insulated, as it was suspended by a silk string, silk being a non-conductor. Insulation prevents the dissipation of the electric fluid, through the surrounding bodies. A person is said to be *insulated*, when he is set with his feet upon a cake of resin, or on a stool with glass feet, or any other good electric, so that the communication between his body and the earth may be thereby cut off.

(61.) **ELECTRIFICATION.** Any body, to which the power of attraction and repulsion, &c. is communicated, is said to be *electrified*.

SECT. II. OF CONDUCTORS & NON-CONDUCTORS.

(62.) One of the first principles in electricity is, that all the substances in nature are either electric or conductors. Numberless experiments prove that a substance which is a conductor cannot be excited; and on the other hand, that a substance which can be excited is not a conductor.

(63.) This law, however, must not be depended on, as holding uniformly and universally; for, strictly speaking, there is no substance in nature that can be justly styled a *perfect electric*, or a *perfect conductor*. In the best conductors the electric virtue finds some resistance; and it is partially transmitted through or along the surface of most if not all electrics. These two classes so far approach each other's limits, that the less perfect conductors may be excited, and even some of these are pretty good conductors.

(64.) We insert the following lists of electric and conductors, in the order of their perfection as they are classed by Mr Cavallo, who begins with the most perfect in each:

(65.) **ELECTRICS.** 1. Glass and all vitrification whatever. 2. Precious stones; of which the most transparent are the best. 3. All resins and resinous compounds; or such consistent oily vegetable productions, as are inflammable, and not soluble in water. 4. Amber. 5. Sulphur. 6. Baked wood. 7. Bituminous substances. 8. Wax. 9. Silk. 10. Cotton. 11. Feathers, wool, hair, and all other dry animal substances. 12. Paper. 13. White sugar and sugar candy. 14. Air. 15. Oils. 16. Metallic calces. 17. Ashes of animal and vegetable substances. 18. All dry vegetable substances. 19. All hard stones.

(66.) Many of these, when very hot, lose their electric property and become conductors; as red hot glass, melted resin, hot air, &c. The best vitrified glass also sometimes becomes a conductor.

(67.) **CONDUCTORS.** 1. Gold. 2. Silver. 3. Copper. 4. Brass. 5. Iron. 6. Tin. 7. Quick-silver. 8. Lead. 9. Semi-metals. 10. Metallic ores. 11. Charcoal, of animal or vegetable substances. 12. Fluids of animal bodies. 13. All other fluids, except air and oils. 14. The effluvia of flaming bodies. 15. Ice. 16. Snow. 17. Metallic salts and most other saline substances. 18. Stony substances. 19. Smoke. 20. Steam.

(68.) Electricity also pervades the vacuum made by an air-pump. Green vegetables, raw meat, &c. are rendered conductors by the fluids they contain. Hence all electrics before excitation should be well dried and some even heated, to free them from every particle of dampness, otherwise they may act as conductors.

(69.) We cannot close this part of our subject without taking notice of the changes made in the same substance by different preparations. A piece of wood just cut from a tree is a good conductor; bake it and it will become an electric; burn it to charcoal, and it is a good conductor again; reduce it to ashes, and these will be found electric. Similar changes are observable in many other bodies, whence the learned and ingenious M. Cavallo infers, that it is "very likely in all substances, there

there is a gradation from the best conductors to the best non conductors of electricity."

LECT. III. Of POSITIVE and NEGATIVE ELECTRICITY.

(50.) If a fine downy feather, or any light body tied to a silk thread, and electrified strongly, touching it with the excited glass tube, it immediately flies from, or is repelled by the glass. If we now present an excited stick of sealing wax, the feather immediately flies towards it. What was attracted by excited wax, is repelled by excited glass. This experiment has given rise to a very important distinction in electricity, and a contrariety of agency.

(51.) Let two light balls formed of cork, or the soft elder, be suspended by fine linen threads in small cylinders of wood, and insulated upon wooden wine glasses, that is wiped dry and free of dust. Upon electrifying the two balls, thus insulated, by excited glass, they will repel each other; but we may destroy this electricity only by touching them with the finger. If again we electrify them, but with excited wax, they will attract each other. But bring the balls electrified by wax towards those electrified by glass, and they mutually fly towards each other.

(52.) From these and similar experiments, the electricities were at first specifically distinguished by the names of *Vitreous* and *Resinous*. That which was thought to be the constant property of rubbed glass, was styled the *VITREOUS ELECTRICITY*; and that which was first observed to be produced by wax and other resinous substances was denominated the *RESINOUS ELECTRICITY*. But the vitreous, for reasons which afterwards appear, is now called by the best names, *POSITIVE or PLUS ELECTRICITY*, the resinous is denominated *NEGATIVE or MINUS ELECTRICITY*.

(53.) That these two electricities are not the same, but that they exhibit very opposite appearances, and great contrariety of agency, appears from the following experiments. Let a person be electrified (see § 60.) upon any good electric, holding a dry glass tube in his left hand, and rubbing with his right: Both the person and the tube will be quickly electrified. If feathers, thread, paper, or any other light substances be presented to his body, they will be attracted and repelled. If another person presents his finger to a spark of light will follow the finger with a snapping noise. In a word he will exhibit the electrical appearance that the tube does.

(54.) Yet the electricity of the person and that of the tube, are quite the opposite of each other; one attracting what the other repels. Thus a small piece of cork or any other light body, insulated or suspended by a silk thread, has been attracted and repelled by the glass tube, if no conductor or substance come in contact with it in this time; it will not again be attracted by the tube. The same happens with the insulated person: if a light substance has been attracted and afterwards repelled by his body, it will not be again attracted. If, however, in this state of repulsion, the tube be presented to this light substance, it will be attracted violently by the tube; and when

repelled by the tube, it will be again attracted by the insulated person.

(75.) If two or more of these light insulated bodies be separately attracted by the tube, and when repelled brought near each other, they will repel each other, and continue in this electrified and repulsive state for some time. The same will happen if they be presented to the insulated person; after which they will likewise repel each other. But if one or more of them be attracted and repelled by the glass tube, and one or more others by the person, and afterwards all of them be brought near each other, they will then mutually attract instead of repelling each other; and instead of remaining in an electrified state, they will extinguish every appearance of electricity.

(76.) These two electricities, therefore, appear to be the opposites of each other, and as if the one was an *affirmative or positive* power, and the other a *negative*, they balance each other, and lose every electrical property and appearance. There is another characteristic difference between them too, in the appearance of their light. If a needle, a wire, or any other pointed body, be presented to the excited tube in the dark, a small lucid globe resembling a star, will be seen upon the point; but if the needle, or wire, be presented to the person, a lucid pencil of rays will appear issuing from the point, and diverging towards the person. These rays appear best when the needle is presented to the person, one inch from his body, while he is rubbing the tube.

(77.) Another characteristic difference has been observed in some experiments. The electricity of the tube, when in the act of passing from a body overcharged with it to another, either not electrified, or possessed of the contrary electricity, shews an indisputable current from the former to the latter; and the electricity of the insulated person, when in the act of passing from a body overcharged with it to another, either not electrified, or possessed of the contrary electricity, shews clearly a current from the latter to the former.

(78.) These two electricities are not only observed in the above mentioned experiment, but in several other cases also; and they always accompany each other; for when different electrics are rubbed, so one will acquire one electricity, and others will acquire the contrary; the rubber, if insulated, shewing at the same time signs of the electricity contrary to that acquired by the excited electric: besides this, almost all electrics may be made to shew at pleasure the one or the other electricity, according to the substance used for a rubber. Hence the following corollaries may be deduced; viz. 1. Whenever two different substances (being both insulated, or only that which is a conductor) are rubbed together, except they are both equally good conductors, they will be both electrified, and one acquire the electricity contrary to the electricity of the other. 2. Almost all the electrics may be made to acquire, at pleasure, the one or the other electricity by using proper rubbers.

(79.) Many causes operate to produce a difference in the electricity. Often the same electric, rubbed with the same rubber, exhibits at one time

signs of positive and at another of negative electricity. A slight variation in the surface, or in the degree of dryness, or a different application of the same substance, often causes this difference. It appears from many experiments, that when two different substances are rubbed together, that whose surface is roughest, or whose electric power is strongest, generally acquires the positive, and the other the negative. And if two electrics every way equal are rubbed together, the substance,

which suffers the greatest friction, acquires the negative electricity, and the other the positive.

(80.) We shall conclude this section with the ingenious Mr Cavallo's Table, which exhibits one view what kind of electricity will be excited in the best electrics by rubbing with different substances. "It might have been much extended (he says) had he chosen to bring into it all the *nutie* as far as is known, but this he thought unnecessary and impracticable."

(81.) TABLE showing the KINDS of ELECTRICITY excited in some ELECTRICS by VARIOUS SUBSTANCES

Electrics rubbed. Electricities.

Substances used as rubbers.

The back of a cat	Positive	Every substance with which it has been hitherto tried,
Smooth glass	Positive	Every substance hitherto tried, except the back of a cat.
Rough glass	Positive	Dry oiled silk, sulphur, metals.
	Negative	Woollen cloth, quills, wood, paper, sealing wax, white wax, the human hand.
Tourmalin	Positive	Amber, air blown with a pair of bellows.
	Negative	Diamond, the human hand.
Hare's skin	Positive	Metals, silk, loadstone, leather, hand, paper, baked wood.
	Negative	Other finer furs.
White silk	Positive	Black silk, metals, black cloth.
	Negative	Paper, hand, hairs, weasel's skin.
Black silk	Positive	Sealing wax.
	Negative	Hare's, weasel's, and ferret's skin, loadstone, brass, silver, iron, &c.
Sealing wax	Positive	Metals.
	Negative	Hare's, weasel's, and ferret's skin, hand, leather, woollen, cloth, &c.
Baked wood	Positive	Silk.
	Negative	Flannel.

SECT. IV. Of the EXCITATION of ELECTRICS.

(82.) It is a well known law in electricity, that all electric substances may be excited by friction or rubbing. This however is not the only method of exciting electrics to exhibit electrical appearances.

(83.) Several electrics are excited by melting or pouring a melted electric into another substance; by heating or cooling; and by evaporation or effervescence. These methods are attended with peculiar phenomena.

(84.) Sulphur, melted in an earthen vessel, and left to cool upon conductors, is found strongly electrical; but not at all when left to cool upon electrics. If melted in a glass vessel and left to cool, both the glass and the sulphur acquire a high degree of electricity; the former positive and the latter negative, whether left to cool upon electrics or conductors. And it is remarkable that the sulphur acquires no electricity till it begins to cool. Melted sulphur poured into a vessel of baked wood, acquires a negative electricity, while the wood acquires a positive; but when poured into rough glass, or sulphur, it shews none.

(85.) Sulphur melted, and poured into a metal cup, and there left to cool, exhibits no electrical appearances whilst in the cup; but if they be separated both will appear strongly electrified; the sulphur *plus* and the cup *minus*. Upon replacing the sulphur in the cup, every electrical sign vanishes; but if, while separate, the electricity of either be withdrawn, they will both appear possessed of the other electricity, on being replaced.

(86.) Melted wax, poured into wood or glass, acquires a negative electricity, and leaves the glass or wood positive. Sealing wax, poured into sul-

phur, acquires a positive electricity, and the wood negative. If a stick of sealing wax broken in two pieces, the extremities that are joined will be electrified, the one positively, the other negatively.

(87.) The late Mr W. HENLY, F. R. S. discovered, that chocolate fresh from the mill, becomes strongly electrical, as it cools in the tin pans. Soon loses this property, but recovers it once more, by being melted in an iron ladle and poured into the tin pans. When the mass becomes dry, the electricity cannot be restored by melting, unless olive oil be mixed with it in the ladle, which case it completely recovers its electricity.

(88.) The TOURMALIN, or *lapis electricus* Linnæus, a hard semi-pellucid fossil, was first served to exhibit electrical phenomena, by heating and cooling. This stone is common in the East Indies, (See TOURMALIN,) and is well named *Electrical stone*, as it possesses many singular electrical properties. It exhibits, however, no electrical appearances, while kept in an equal temperature; but by increasing its heat, it becomes electrical; and still more so by diminishing it. Electricity appears, not over its whole surface but only on two opposite sides, which have been styled its *poles*, as they are in a line with its centre, and in the same direction with its strata, which direction it is opaque, though semi-transparent in the other.

(89.) The tourmalin, while heating, has one of its sides electrified positively, and the other negatively; but while cooling, the former becomes negative and the latter positive. If heated and allowed to cool without either side being touched the former will be positive and the latter negative.

time it is heating or cooling. If excited, each of its sides, or both at once may be rendered positive. If heated or cooled upon a substance, that substance will become of the electricity contrary to that of the tourmalin, which was laid on it. The electricity of both sides, or of either, may be rendered by heating or cooling the stone, in contact with other bodies.

(90.) If a tourmalin be cut in pieces, each piece has its positive and negative poles, as well as the whole stone. All the above properties are variable in vacuo. If this stone be covered over with wax, oil, or any similar electric, it will have the same electric signs, as without the coating.

(91.) Mr WILLIAM CANTON remarked a vivid spark upon this stone, while heating in the dark, which he could determine which end of the tourmalin was positive or negative. When excited, it emits very strong flashes in the dark, on the positive to the negative end. Mr Canton has also observed the *Brazilian emerald* emit a white heating in the dark. Mr Cavallo "imagined that every other precious stone will show it, the electric power be sufficiently strong; since light is a consequence of the passage of a sufficient quantity of electricity through the air, or other resisting medium."

(92.) The electrical power of the tourmalin is sometimes improved, sometimes injured, sometimes is the least affected by a strong fire. Of the above properties, which were supposed to be peculiar to the tourmalin, are possessed by several hard precious stones, which are capable of becoming electrical by heating and cooling, and have their positive and negative sides lying in the direction of their strata, &c.

(93.) The method of exciting electricity by EVAPORATION was lately discovered by Mr VOLTA; he observed that the evaporation of water, and of other fluids, as well as certain effervescences excited electricity. His experiments seem to show, that fluids, or other bodies reduced to vapour, become electrified positively, and leave the bodies from which they evaporated, electrified negatively; and that on the other hand, when the vapours are condensed into a fluid, they become electrified negatively, and leave the bodies with which they were last in contact electrified positively.

ART. V. OF COMMUNICATED ELECTRICITY.

(94.) "Under the title of COMMUNICATED ELECTRICITY, (says M. Cavallo) falls almost all that is known of the subject; the passage of this from one body to another is what causes light; by being communicated to other bodies, we see its attraction; by its quick transition it destroys animal and vegetable life; in short it is by this communication, that the world is at all known and cultivated."

(95.) When electricity is induced on a body, it is confined there by electricities alone; and for a longer or shorter time as these are more or less abundant. A glass tube rubbed acquires a quantity of electricity, which remains, in the glass, because it is surrounded by the air, which is an electric.

But as the air is never a perfect electric, the glass tube cannot retain the electrical virtue perpetually, but only for a longer or shorter time, as the air happens to be in a more or less perfect electric state. It therefore imparts some of this virtue to the air, or to the conducting particles in it, gradually, till it loses it altogether.

(96.) A finger or any other conductor, presented to an excited electric, will receive a spark, which is a part of its electricity; but cannot receive the whole, because the excited electric, being a non-conductor, cannot convey all its electricity to that side to which the conductor has been applied. Hence a conductor, presented to different parts of an excited electric, will receive at every approach a spark, without repeating the excitation, till the whole power excited is exhausted.

(97.) When a conductor which communicates with the earth, is exhibited to an excited electric, at a proper distance, it acquires an electricity, on that side, contrary to that of the electric, and which increases the nearer they approach, till by the eager attraction between the two electricities, the conductor receives a spark from the electric, and thus the equilibrium is restored. If the conductor be insulated, both sides will appear electrified, but with different electricities; the side next the electric having acquired the electricity contrary to that of the electric, and the opposite side one of the same kind. These electricities increase as the conductor approaches the electric, but upon receiving the spark, the electricity of the conductor becomes the same with that of the electric throughout.

(98.) All these effects are similar, though some other electric, as glass, rosin, wax, &c. be interposed between the excited electric and the conductor; for the spark forces through the interposed electric, as it always does through the air, when it causes the snapping noise, that attends it.

(99.) When an insulated conductor has received the electricity from an excited electric, it is said to be *electrified by communication*. It then acts like the excited electric; excepting that when touched by another conductor, that communicates with the earth, it discharges its whole electricity at once. The reason is, because the electricity belonging to the whole of the conductor is easily communicated through its own substance to the other conductor. Hence the electricity discharged from an electrified conductor is much more powerful than that discharged from an electric.

(100.) If an insulated conductor be touched with another electrified conductor, it will acquire part of its electricity, and each will show signs of it. It will not, however, be equally divided between them, unless they are equal in respect to their surfaces and situations. The quantity of electricity in each will be in proportion to their surfaces and not to the quantity of matter in each. Mr Cavallo, specifies these proportions very accurately in his *Complete Treatise*; Vol. I. p. 40, 41. Edit. 4th.

(101.) The distance to which an electric spark will go through the air, to reach a conductor, is in proportion to its quantity of electricity, the perfection of the conductor, and to the sharpness of

the parts from which it flies off and on which it strikes. The noise attending it also is in proportion to all these. A sharp pointed body will throw off the electricity to, and receive it from, a greater distance, than a body of any other shape, but the communication is attended with little light and no noise, as the electricity comes by little and little, not in a large body. A current of air is sensibly felt in these cases at an electrified point, and always in the direction of the point.

(102.) An electric spark, taken upon any part of a living body, occasions a disagreeable sensation, and more or less so in proportion to the strength of the spark. Electricity strongly communicated to insulated animal bodies, quickens the pulse and promotes perspiration. If the face or any part of the body be presented to an excited electric, or an electrified conductor, it will feel as if a wind was blowing, or rather a spider's web drawn over it. If an excited electric is presented to the nose, a smell will be perceived like that of phosphorus; but communicated electricity does not occasion any such sensation, unless a large quantity passes suddenly from one body to another.

(103.) A pretty large quantity of electricity pervades a long conductor with an astonishing though imperceptible velocity, but a small quantity takes more time.

(104.) Substances possessed of the same electricity repel, and those possessed of the opposite electricities attract each other. There is no electric attraction between bodies possessed of different electricities; nor any electrical repulsion but between those possessed of the same electricity.

(105.) Electricity communicated to insulated fruits, fluids, and other bodies in a state of evaporation, increases that evaporation.

(106.) Electricity promotes vegetation by increasing the perspiration of vegetables. Plants often and long electrified, have shewn a more lively appearance than others that were not. Mr Kœfflin, however, says, that negative electrization retards both animal and vegetable life.

(107.) When electricity is communicated to insulated vessels containing water that is running from a pipe, the electrified stream is but little accelerated, unless the tube be capillary, in which case it is accelerated with an impetuosity and velocity, which is increased in proportion to the smallness of the tube.

(108.) The electric power is neither affected by heat nor cold, for an iron bar made red hot, and any conducting fluid hard frozen, when electrified, exhibit sparks, attract or repel nearly as well as in their natural temperature. And it neither affects, nor is affected by the magnet.

(109.) Electricity can be communicated to electrics, although it is done with difficulty, as their substance is impervious to it in a great degree. To make an electric acquire electricity, it must be touched several times and in different parts with the electrified body.

SECT. VI. Of CHARGED ELECTRICS, and particularly of the LEYDEN PHIAL.

(110.) "If to one side of an electric (says M. Cavallo) sufficiently thin, as for instance a pane of common window glass, a plate of sealing wax,

&c. be communicated one electricity, and to the opposite side the contrary, that plate in which it is said to be *charged*; and the two electricities never come together, except a communication conducting substances be made between the sides, or the electric be broken by the power of electric attraction. When the two electricities of a charged electric are by any means united, and therefore their power destroyed, the electric is then said to be *discharged*, and the union of these two opposite powers is called *electric shock*.

(111.) "To avoid the difficulty of communicating electricity to an electric plate, it is customary to coat the sides of it with some conducting substance, as tin foil, gilt paper, &c. by which means the charging and discharging becomes easy; for when the electricity is communicated to one part of the coating, it is immediately spread through all the parts of the electric that are in contact with that coating; and when the electric is to be discharged, it is sufficient to make conducting communication between the coating of both sides, to discharge entirely the electricities of that electric."

(112.) He adds, that "the coatings of the sides of an electric should not come very near to another towards the edge of the plate, for though they do not absolutely touch one another, yet when they are electrified, the electricity easily force a passage through the air, and by passing over the surface of the electric, from one coating to the other, render it incapable of receiving any charge."

(113.) It is by means of charged electrics, that we become acquainted with the greatest power of electricity, as we can accumulate these powers and use them in various experiments with advantage. If a glass plate be properly coated on both sides with a conducting substance, and if to one of these coatings be communicated some electricity, the other coating, while communicating with the earth, or with a sufficient quantity of conducting bodies, acquires by itself an equal quantity of contrary electricity; but if, while one side is acquiring electricity, the opposite side does not communicate with the earth, or the conducting substances, the glass cannot be charged. The reason why, while one side of the glass receives the electricity, the opposite side acquires the contrary, the property of bodies to acquire an electricity, contrary to that possessed by a contiguous electrified body; and the cause that hinders the two electricities from mixing, is the interposition of the glass plate which is *impermeable* to electricity: Although if the glass be too thin, or the charge too high, the strong attraction, between the positive and negative electricities, forces a passage through the glass and discharges it.

(114.) The above mentioned remarkable property of electricity was first satisfactorily observed at LEYDEN, with a bottle containing water while served as an inside coating, while the accidental application of the operator's hands on the outside served for another. Hence a phial or jar coated within and without, for the purpose of being charged has been denominated the LEYDEN PHIAL or *Electric Jar*: and the charging and discharging

coated glass, bottles, or jars, is filed the *Leyden experiment*.

(115.) It is of little consequence of what form a charged electric or Leyden jar be, provided the glass be sufficiently thin. "The thinner it is, says M. Cavallo,) the greater charge it is capable of receiving; for the stronger in proportion is the power of the electricity of one side, to cause a contrary electricity on the opposite side. How thick a glass plate should be to become incapable of being charged, hath not yet been determined."

(116.) The spark occasioned by the discharge of a charged electric is more powerful, more violent, and makes a greater report than that drawn from an electrified conductor, although it is not long. If the communication between the two ends of a charged jar be by imperfect conductors, as pack thread, or the like, the discharge will be without explosion.

(117.) When the discharge of a Leyden phial made through the body of a living person, it produces a disagreeable sensation by its sudden action, contracting the muscles through which it passes. Hence the effect of such a discharge is called the *electric shock*. This shock is greater or less in proportion to the height of the charge and quantity of coated surface. Its power may be augmented at pleasure, by increasing the quantity of the coated glass. A great number of jars, so connected together, as that their charges may be combined, constitutes an *electrical battery*. See PART III. and BATTERY, N° II.

(118.) In discharging an electric phial, the rapidity with which the electricity performs its circuit is so great, that Dr PRIESTLEY says it has been found to employ no perceivable time in going through a conductor of several miles which coated the two coatings of a phial. (*Hist. of El. Per. VIII. Sect. ii.*) The inflections of a conductor make no perceptible difference in the force or noise of an electric shock, though M. Cavallo says these are sensibly weakened by its inflections.

(119.) A strong shock given through an animal, destroys the animal or vegetable life. If the circuit be interrupted by electric or imperfect conductors, of no great thickness, the electric shock will break them, and will often disperse them in various directions. A strong shock sent through a slender piece of metal, melts it into globes. If the metal be inclosed between pieces of glass, the electricity will force it into the glass, frequently will shatter the glasses to pieces. The glasses inclosing the metal be pressed by the weight of a small shock will not only raise the weight, but break such thick glasses as would otherwise require the force of a large battery.

(120.) A strong shock of electricity will also reduce the calces of metals. And though magnetism and electricity do not in ordinary cases interfere with each other, yet a great force of the one will both destroy and impart the magnetic force, and reverse the poles of the needle.

(121.) Many other phenomena of the electric or Leyden phial, are enumerated by M. Cavallo, for which we must refer to his treatise.

SECT. VII. Of ATMOSPHERICAL ELECTRICITY, and its EFFECTS; particularly LIGHTNING.

(122.) ELECTRICITY is not only to be observed by rubbing an electric or warming a tourmalin, but has been found to be widely diffused through the atmosphere. It has been discovered that the air, the clouds, and even the rain, contain it; and that thunder and lightning, the aurora borealis, meteors, &c. are among its various and astonishing effects.

(123.) The great similarity between lightning and the electric fluid had been for some time remarked by philosophers, particularly by the Abbe NOLLET; but it was not suspected that they were the effects of the same cause, much less that the phenomena of lightning could be imitated by electricity, and those of electricity by lightning, till the celebrated Dr FRANKLIN hazarded the bold assertion, and advised the experiment to be made, and till he and the French philosophers proved the fact in 1752.

(124.) Indeed, all the wonderful phenomena exhibited by electricians are only imitations on a small scale of those great effects which astonish and alarm us; and they depend upon the same mechanism. The same properties, and zig-zag sparks, their similar action on conducting substances, the power of rending, inflaming, and dispersing in every direction the substances on which lightning acts with power, the giving polarity to ferri-ginous matter, &c. all concur to shew their identity. But independent of these similarities, the fact is proved by the plainest and clearest evidence; when the atmosphere is charged with thunder clouds, we can by an electrical kite draw from it the matter of lightning, and with this matter perform every electrical experiment with which we are acquainted.

(125.) There is not indeed a single phenomenon of the one, but may be imitated by the other. Lightning destroys edifices, trees, and animals; it goes through the best conductors that it meets with in its course, and if its passage be obstructed by electric, or less perfect conductors, it rends them, tears them to pieces, and disperses them in all directions. Lightning melts metals, and burns inflammable substances, &c. all of which effects can be produced by electricity.

(126.) The air at some distance from houses, trees, masts of ships, &c. is commonly electrified positively, especially in frosty and clear weather. It is also electrified in foggy weather. "Clouds as well as rain, snow, and hail, says Mr Cavallo, are almost constantly electrified, but oftener negatively than positively. How they come to be so, is not yet clearly ascertained, unless upon the principle of electricity produced by evaporation and condensation of lightning is the effect of their electricity, which darting from a cloud, or a number of clouds, highly electrified, strikes into another cloud, or upon the earth; preferring the most lofty and pointed places, and thus producing all those dreadful effects which are known to be occasioned by it," and of which it may not be improper to give a description, with an instance or two.

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(127.) When lightning is accompanied with thunder, it is well defined, and has generally a zig zag form; sometimes it only make one angle like the letter V, sometimes it appears like the arch of a circle. But the most formidable and destructive form which lightning is ever known to assume, is that of balls of fire. The motion of these is very often perceptible to the eye; but wherever they fall, much mischief is the result of their explosion. The next to this, in its destructive effects, is the zig-zag kind; for that species, whose flashes are indistinct, and whose form cannot easily be observed, is seldom known to do much hurt. The colour of lightning is also an indication of its power to do mischief, the palest and brightest flashes being most destructive in their effects.

(128.) The zig-zag kind of lightning, when near, is remarkable for a kind of omnipresent property. If two persons are standing in a room, looking different ways, and a loud clap of thunder happens, accompanied with the zig zag lightning, they will both distinctly see the flash, not only by that indistinct kind of illumination of the atmosphere, which is occasioned by fire of any kind, but the very form of the lightning itself, and every angle it makes in its course will be as distinctly perceptible, as though they had looked directly at the cloud from whence they proceeded. If a person happened at that time to be reading, he would distinctly see the form of the lightning between himself and the book.

(129.) Lightning usually confines its effects to a small space; seldom exhibiting phenomena like those which accompany explosions of gun-powder, or of inflammable air in mines. Instances, however, of terrible explosions have occurred. The following is perhaps one of the most remarkable: "August 2, 1763, about six in the evening, there arose at Anderlight, about a league from Brussels, a conflict of several winds born upon a thick fog. This conflict lasted 4 or 5 minutes, and was attended with a frightful hissing noise, which could be compared to nothing but the yellings of an infinite number of wild beasts. The cloud then opening, discovered a kind of very bright lightning, and in an instant the roofs of one side of the houses were carried off and dispersed at a distance; above 1000 large trees were broke off, some near the ground, others near the top, some torn up by the roots; and many of the branches and tops carried to the distance of 60, 100, or 120 paces. Whole coppices were laid down, as corn is by ordinary winds; and the glass of the windows, situated near the spot, was shivered to atoms."

(130.) It is not unusual for thunder-storms to produce most violent whirlwinds, such as are by some philosophers attributed to electricity; nay, even to occasion an agitation in the waters of the ocean itself; and all this too after the thunder and lightning has ceased. Of this the following instance happened at Great Malvern, October 16, 1761: At a quarter past 4 in the afternoon, the people were surprised with a most shocking and dismal noise; 100 forges, all at work at once, could scarce equal it. Upon the side of the hill, about 400 yards to the SW, there appeared a prodigious smoke, attended with the same violent

noise, as if a volcano had burst out of the hill; it soon descended, and passed on within about 100 yards of the south end of the house; it seemed to rise again in the meadow just below it, and continued its progress to the east, rising in the same manner for four different times, attended with the same dismal noise as at first; the air being filled with a nauseous and sulphureous smell. It gradually decreased till it was quite extinguished in a turnip field, about a quarter of a mile below the house; the turnip leaves, with leaves of tree dirt, sticks, &c. filled the air, and flew high than any of the hills. The thunder ceased when this happened, and the air soon afterwards became calm and serene."

(131.) From the remarks of M. DE LUC, would appear, that lightning often arises from sudden production of a great quantity of the electric fluid; that which is then manifested not being apparent as electricity, but just before we receive its effects. This is further confirmed by observations when on mountains, where be often opportunities of viewing these phenomena. Thus in a storm on the Buët, one of the Alps, while the air was perfectly transparent and (the last circumstance being determined by the grometer), clouds began to form in different parts, when thickened and united, embraced the summit of the Buët, and supported themselves against Mount Blank, and the summits of the neighbouring mountains. M. De Luc and his companions were overwhelmed with rain; there was so vast a deal of lightning; which was often violent, and lasted for a considerable time.

(132.) Some idea may be formed of the prodigious quantity of the electric fluid, that is sometimes manifested, and passing between the clouds and the earth, by an instance or two with which we are furnished by M. De Luc. Thus a cloud was observed at the top of the mountains of the Jura; it was formed of a mass, whose obscurity rendered it terrific, producing, in those places where it was situated, night at noon day; the mass was plowed as it were by lightning, and was soon after followed by a grumbling kind of thunder: There fell so prodigious a quantity of water and ice from this cloud, that the country was ravaged by the torrents, the hedges were washed down, and the ditches half filled with hail. Even a small city in Germany, was struck in one day in forty-two different places; 7 persons were killed, and 3 houses were set on fire, but quenched by the rain, which came down in torrents.

(133.) After the identity of lightning and electric fluid was discovered, electricians began to ascribe other phenomena, formerly unaccounted for, to atmospheric electricity. Among these the aurora borealis was naturally and with reason ascribed to this cause. See AURORA BOREALIS, &c. This conclusion was drawn not only from the indication of its light by the electrical spark, but from the observation, that the aurora borealis, when very strong, has been known to disturb the polarity of the magnetic needle. (See Phil. Trans. vol. LIX. p. 88.) The late Mr CANTON made several experiments in confirmation of this idea, collecting considerable quantities of the electric fluid, during the time of an aurora borealis. apparatus

apparatus was very simple; it consisted of an insulated fishing rod, with a wire twisted round it, and fixed on the top of his house.

(134.) Those meteors commonly called FALLING STARS, that are often seen in the atmosphere in the evenings, are by analogy supposed to be electrical appearances, or transitions of the electric fluid. Electricity is also supposed to be the cause of all other meteors, as well as of those white clouds that are often seen at night, especially in warm latitudes. Water spouts, hurricanes, and whirlwinds, (as above observed,) have also been ascribed to the same cause; and no satisfactory solution of the causes and phenomena of earthquakes has ever been given, till the discovery of the astonishing powers of electricity afforded the proper data for a just and rational theory of these terrible convulsions of nature. See EARTHQUAKE, § 22, 23. Electricity is also with great probability supposed to be the cause of volcanoes. See VOLCANO.

(135.) From his experiments performed with the atmospheric electrometer, and the electrometer for the rain, Mr Cavallo deduces the following conclusions, respecting the electricity of the atmosphere.

(136.) "I. That there is in the atmosphere at all times a quantity of electricity; for whenever I use the above mentioned instrument, it always acquires some electricity.

(137.) "II. That the electricity of the atmosphere, or fogs, is always of the same kind, namely positive; for the electrometer is always negative except when it is evidently influenced by the clouds near the zenith.

(138.) "III. That, in general, the strongest electricity is observable in thick fogs, and also in stormy weather; and the weakest, when it is cloudy, warm, and very near raining; but it does not seem to be less by night than in the day.

(139.) "IV. That in a more elevated place the electricity is stronger than in a lower one; for having tried the atmospheric electrometer both in a stone and iron gallery on the cupola of St Peter's cathedral, I found that the balls diverged much more in the latter than in the former less elevated place. Hence it appears, that if this rule be in place at any distance from the earth, the electricity in the upper regions of the atmosphere must be exceedingly strong."

SECT. VIII. Of the ADVANTAGES derived from ELECTRICITY.

(140.) Under this head, to which M. Cavallo devotes a whole chapter of his excellent treatise, he observes, that "besides the field that electricity has opened for farther discoveries, and for the satisfaction of that curiosity, which before attended the contemplation of so many wonderful phenomena as have been explained by this science, there are two great advantages derived from electricity; the one is a defence against the direful effects of lightning, and the other a remedy for many disorders incident to the human body.

(141.) As the latter of these advantages forms the subject of our IVth Part, which is devoted to MEDICAL ELECTRICITY, we shall here only quote Mr Cavallo's directions with regard to the former.

(142.) "In order to guard edifices or ships from

being damaged by lightning, it was judiciously proposed by Dr Franklin, to raise a metallic conductor some feet above the highest part of the building, and continue it down the wall till it penetrated some feet into the ground; by this means the house could never receive any damage; for whenever the lightning should happen to fall upon it, it is evident that the conductor, being of metal, and higher than any part of the building, would certainly attract it, and, by conducting it to the ground, hinder that building from receiving any damage; it being well known that electricity always strikes the nearest and best conductors that it meets with in its way.

(143.) "The reasonableness and truth of this assertion has been confirmed by numberless facts, and the practice of raising such conductors has been found exceedingly useful, particularly in hot climates, where thunder storms are very frequent, and the damages occasioned by the same too often experienced.

(144.) "In regard to the construction of such conductors, there have been some controversies among electricians; and the most advantageous manner of using them has not, without a great many experiments, and but very lately, been ascertained. Some philosophers have asserted, that such conductors should terminate in a blunt end, that they might the less invite the lightning from the clouds; for a blunt end will not attract electricity from so great a distance as a sharp point. But other philosophers have thought a pointed termination to be much preferable to a blunt one; and their assertion seems, on the following accounts, founded on much better reasoning.

(145.) "A sharp-pointed conductor, it is true, will attract electricity from a greater distance than a blunt one, but at the same time will attract and conduct it by little and little, or rather by a continued stream, in which manner a remarkably small conductor is capable of conducting a very great quantity of electricity; whereas a blunt terminated conductor attracts the electricity in a full separate body, or explosion, in which manner it is often made red-hot, melted, and even exploded in smoke, and by such a quantity of electricity as perhaps would not have at all affected it, if it had been sharply pointed.

(146.) "A sharp-pointed conductor certainly invites the matter of lightning easier than a blunt one; but to invite, receive, and conduct it in small quantities, never endangers the conductor: and the object of fixing a conductor to a house, is to protect the house from the effects of, and not the conductor from transmitting the lightning.

(147.) "It is an observation much in favour of sharp pointed conductors, that such steeples of churches, and edifices in general, as are terminated by pointed metallic ornaments, have very seldom been known to be struck by lightning; whereas others that have flat or blunt terminations, and have a great quantity of metal in a manner insulated on their tops, are often struck by it, and it is but seldom that they escape without great damage. However, it happened not long ago, that a building furnished with many sharp conductors was struck by lightning.

(148.) "Besides these considerations, a sharp-

pointed conductor, by the same property of attracting electricity more than a blunt one, may actually prevent a stroke of lightning, to do which a blunt ended one is absolutely incapable.

(149.) 'A conductor therefore to guard a building, as it is now commonly used in consequence of several considerations, and experiments, should consist of one iron rod * about three quarters of an inch thick, fastened to the wall of the building, not by iron cramps, but by wooden ones. If this conductor were quite detached from the building, and supported by wooden posts at the distance of one or two feet from the wall, it would be much better for common edifices, but it is more particularly advisable for powder magazines, powder mills, and all such buildings as contain combustible ready to take fire. The upper end of the conductor should be terminated in a pyramidal form, with the edges, as well as the point, very sharp; and if the conductor be of iron, it should be gilt, or painted, for the length of one or two feet. This sharp end should be elevated above the highest part of the building (as above a stack of chimnies, to which it may be fastened) at least five or six feet. The lower end of the conductor should be driven five or six feet into the ground, and in a direction leading from the foundations; or it would be better to connect it with the nearest piece of water, if any be at hand. If this conductor, on account of the difficulty of adapting it to the form of the building, cannot conveniently be made of one rod, then care should be taken, that where the pieces meet, they be made to come in as perfect a contact with one another as possible; for, as we observed before, electricity finds considerable obstruction where the conductor is interrupted.

(150.) 'For an edifice of a moderate size, one conductor, in the manner already described, is perhaps sufficient; but, in order to secure a large building from sustaining any damage by lightning, there should be two, three or more conductors, in proportion to the extent of the building.

(151.) 'In ships a chain has often been used for this purpose, which, on account of its pliability, has been found very convenient, and easy to be managed among the rigging of the vessel; but as the electricity finds a great obstruction in going through the several links, for which reason chains have been actually broken by the lightning, so their use has now been almost entirely laid aside; and, in their stead, copper wires a little thicker than a goose-quill have been substituted, and found to answer very well. One of these wires should be elevated two or three feet above the highest mast in the vessel; this should be continued down the mast, as far as the deck, where, by bending, it should be adapted to the surface of such parts, over which it may most conveniently be placed, and, by continuing it down the side of the vessel, it should be always made to communicate with the water of the sea.

(152.) 'In regard to personal security, in case a thunder-storm were to happen while a person is in

a house not furnished with a proper conductor it is advisable not to stand near places where there is any metal, as chimnies, gilt frames, iron castments, or the like; but to go into the middle of a room, and endeavour to stand or sit upon the best non conductor that can be found at hand, as an old chair, a stool, &c. "It is still safer (Dr FRANKLIN) to bring two or three mattresses or beds into the middle of the room, and folding them up double, put the chair upon them; they not being so good conductors as the wall, the lightning will not choose an interrupted course through the air of the room and the bedding, when it can go through a continued better conductor, the wall. But where it can be had, a hammock or swinging bed, suspended by silk cords equally distant from the walls on every side, from the ceiling and floor above and below, affords the safest situation a person can have in a room whatever, and what indeed may be deemed quite free from danger of any stroke by lightning."

(153.) 'If a storm was to happen whilst a person is in the open fields, and far from any building, the best thing he can do is to retire within a small distance of the highest tree or trees he can get at; he must by no means go quite near them, but should stop at about fifteen or twenty feet from their outermost branches; for if the lightning should fall thereabout, it will very probably split the trees; and in case a tree was to be split, he is safe enough at that distance from it.

(154.) We shall conclude this section with a short extract from the EARL OF STANHOPE's latest work, entitled *Principles of Electricity*, containing the requisites necessary for the proper construction of conductors for lightning, in order to preserve buildings from its depredations; and which are quoted with approbation by Mr Cavalieri. These requisites are,

(155.) "1. That the Rods be made of the best substances as are the best conductors of electricity. 2. That the rods be uninterrupted and perfectly continuous. 3. That they be of a sufficient thickness. 4. That they be perfectly connected with the common stock. 5. That the upper extremity of the rods be as acutely pointed as possible. 6. That it be very finely tapered. 7. That it be prominent. 8. That each rod be carried in the shortest convenient direction, from the point at its upper end to the common stock. 9. That there be neither low nor prominent bodies of metal upon the top of a building proposed to be secured, but such as are connected with the conductor by some proper metallic communication. 10. That there be a sufficient number of high and pointed rods: And, That every part of the building be very substantially erected."

PART II.

THEORY OF ELECTRICITY.

SECT. I. Of the PRINCIPAL THEORIES formed by DIFFERENT AUTHORS.

(156.) The mind of man is not satisfied with

* "Copper would do much better than iron for a conductor: it being a more perfect conductor of electricity, and at the same time not being subject to contract rust so soon as iron."

the knowledge of the facts, which an attention to the phenomena of nature presents to his view. He wishes to account for them; to trace the effects from their effects; and although philosophers and ages have been repeatedly and almost constantly failed in their endeavours to discover the causes, yet the same principle still excites the positive investigator to build theory after theory and to erect one hypothesis upon the ruins of another.

(157.) We cannot therefore be surprised, that the wonderful phenomena of electricity should have excited this active principle of human nature to account for them, upon the first observation of them. In fact, this was even attempted by Thales, who first observed the attractive power of amber. At this property he was so much struck, that he reckoned the amber to be *animal*. With regard to the conjectures of Theophrastus on this subject, we are entirely in the dark; but, among the succeeding electricians, all the phenomena were derived from UNCTUOUS EFFLUVIA emitted by the excited electric.

(158.) These were supposed to fasten upon all bodies in their way, and to carry back with them that were not too heavy. For, at that time, the idea of every kind were supposed to return to the bodies from which they were emitted; as none could otherwise account for the substance being sensibly wasted by the constant emission. When these light bodies, on which the unctuous effluvia had fastened, were arrived at the excited electric, a fresh emission of the effluvia was supposed to carry them back again. But this idea of the effluvia was not thought of till electric repulsion, as well as attraction, had been fully ascertained.

(159.) The discovery of a difference between conducting and non-conducting substances, threw considerable difficulties in the way of those who maintained the hypothesis of unctuous effluvia. When the Newtonian philosophy began to be generally received, the terms *attraction* and *repulsion* were quickly introduced into electricity, as well as other branches of philosophy; and the unctuous effluvia instead of being of an *unctuous* nature, were said to be of an attractive or repulsive one. At the same time, the apparent stop which is put to the progress of these effluvia by any electric substance, introduced a question not yet well decided, viz. Whether electric bodies are penetrable by the fluid or not?

(160.) When M. DU FAY discovered the two opposite species of electricity, at that time distinguished by the names of *vitreous* and *resinous*, and afterwards by those of *plus* and *minus*, or positive and negative, he formed the idea of two distinct electric fluids. Both these were supposed to have a repulsive power with respect to themselves, but an attractive one with regard to one another. As both electrical attraction and repulsion were the same phenomena to be accounted for, this theory seemed the purpose well enough. To account for attraction and repulsion by an *attractive* and *repulsive* power, was indeed no explication at all; but it afforded a change of terms, which is too frequently mistaken for an explanation both in electricity and other parts of philosophy.

(161.) At last, however, M. DU FAY dropped his opinion concerning the existence of two electric fluids, and thought that all the phenomena might be accounted for from the action of a single one. The vitreous or positive electricity, which was supposed to be the stronger, he thought might attract the negative, or weaker electricity. It is indeed true, that, in many experiments, the positive electricity doth manifest a superiority in strength over the negative, something like that superior degree of vigour which is observed in one of the poles of a loadstone over the other. According to M. DU FAY's own principles, however, had this been the case, a body positively electrified ought to have attracted one electrified negatively more weakly than one not electrified at all; which is contrary to experience.

(162.) During all this time, it was imagined, that the electric matter, whether it consisted of one or more fluids, was produced from the electric body by friction; but by a discovery of Dr WATSON'S, it became universally believed, that the glass globes and tubes served only to set the fluid in motion, but by no means to produce it. He was led to this discovery by observing, that, upon rubbing the glass tube, while he was standing upon cakes of wax or resin (in order, as he expected, to prevent any discharge of the electric matter upon the floor,) the power was, contrary to his expectation, so much lessened, that no snapping could be observed upon another person's touching any part of his body; but that, if a person not electrified held his hand near the tube while it was rubbed, the snapping was very sensible. The event was the same when the globe was whirled in similar circumstances. For, if the man who turned the wheel, and who, together with the machine, was suspended upon silk, touched the floor with one foot, the electric fire appeared upon the conductor; but if he kept himself free from any communication with the floor, little or no fire was produced. He observed, that only a spark or two would appear between his hand and the insulated machine, unless he at the same time formed a communication between the conductor and the floor; but that then there was a constant and copious flux of the electric matter observed between them.

(163.) From these, and some other experiments of a similar kind, Dr WATSON discovered what he called the *complete circulation* of the electric matter. When he found, that, by cutting off the communication of the glass globe with the floor, all electric operations were stopped, he concluded, that the electric fluid was conveyed from the floor to the rubber, and from thence to the globe. For the same reason, seeing the rubber, or the man who had a communication with it, gave no sparks but when the conductor was connected with the floor, he as naturally concluded, that the globe was supplied from the conductor, as he had before concluded that it was supplied from the rubber. From all this he was at last led to form a new theory of electricity, namely, that, in electric operations, there was both an *efflux* of electric matter to the globe and the conductor, and likewise an *efflux* of the same electric matter from them.

(164.) Some time after, however, the Doctor retracted this opinion concerning the afflux and efflux, and supposed that all the electric phenomena might be accounted for, by the excess or diminution of the quantity of electric matter contained in different bodies. This theory was afterwards adopted by Dr FRANKLIN, and continues to be generally received.

(165.) One great difficulty with which the first electricians were embarrassed (and which is yet scarcely removed), was to ascertain the direction of the fluid. At first, all electric powers were supposed to reside in the excited globe or glass tube. The electric spark therefore was imagined to proceed from the electrified body towards any conductor that was presented to it. It was never imagined that there could be any difference in this respect, whether it was amber, glass, sealing wax, or any thing else that was excited. This progress of the electric matter was thought to be quite evident to the senses; and therefore the observation of electric appearances at an insulated rubber occasioned the greatest astonishment.—In this case, the current could not be supposed to flow both from the rubber and the conductor, and yet the first appearances were the same.

(166.) To provide a supply of the electric matter, therefore, philosophers were obliged to suppose, that, notwithstanding appearances were in both cases much the same, the electric fluid was really emitted in one case by the electrified body, and received by it in the other. But now being obliged to give up the evidence from sight for the manner of its progress, they were at a loss, whether, in the usual method of electrifying by excited glass, the fluid proceeded from the rubber to the conductor, or from the conductor to the rubber. It was, however, soon found, that the electricity at the rubber was the reverse of that at the conductor, and in all respects the same with that which had before been produced by the friction of sealing wax, sulphur, rosin, &c. Seeing, therefore, that both the electricities were produced at the same time, by one and the same electric, and by the same friction, all philosophers were naturally led to conclude, that both were modifications of one fluid; though in what manner that fluid was modified throughout the immense variety of electric phenomena, was a matter not easy to be determined.

(167.) On this subject, the Abbe NOLLET adopted the doctrine of *afflux* and *efflux*. He supposed, that, in all electrical operations, the fluid is thrown into two opposite motions; that the afflux of this matter drives all light bodies before it by impulse upon the electrified body, and its efflux carries them back again. He was, however, very much embarrassed in accounting for facts where both these currents must be considered; as in the quick alternate attraction and repulsion of light bodies by an excited glass tube, or other excited electric. To obviate this difficulty, he supposes that every excited electric, and likewise every body to which electricity is communicated, has two orders of pores, one for the emission of the effluvia, and another for the reception of them. M. DE TOURS improved upon Nollet's hypothesis, and supposed that there was a difference

between the affluent and effluent current, and that the particles of the fluid are thrown in vibrations of different qualities, which makes some of these currents more copious than the other, according as sulphur or glass is used. It is impossible, however, that suppositions so very arbitrary could be at all satisfactory, or received as proofs of the electric phenomena.

(168.) ELECTRICIANS were equally puzzled to determine the nature of the electric fluid. It has been pretty generally believed, that *fire* was a distinct element, but arose from some violent pulsions, rarefactions, &c. among the particles ignited bodies. The great resemblance of the electric fluid to elementary fire, however, seemed strongly to militate against this opinion. The hypothesis therefore of fire as a distinct principle element began to revive. Some maintained, that the electric fluid was really this principle; others thought that it was a fluid *sui generis*, very much resembling that of fire; while others, with Boulanger at their head, imagined that it was nothing more than the finer parts of the atmosphere, which crowded upon the surfaces of electric bodies, when the grosser parts had been driven away by the friction of the rubber.

(169.) This last opinion, however, soon received a full refutation from the experiments of Watson above mentioned; by which it was proved, that the electric matter came not from the atmosphere, but from the earth. About the time the Leyden phial was discovered; and extraordinary effects of it rendered the inquiry into the nature of the electric fluid much more general than before. But still, the violent prejudice against the existence of fire as a real element or fluid distinct from terrestrial bodies, continued in its full vigour, and the most extravagant theories were acquiesced in, rather than the simple supposition above mentioned.

(170.) It would be tedious, and indeed impossible to give an account of all the theories which were now invented. One of the most remarkable and least inconsistent, was that of Mr WILSON. According to this gentleman, the chief agent in the operations of electricity is Sir Isaac Newton's ether; which is more or less dense in all bodies in proportion to the smallness of their pores, except that it is much denser in sulphureous and unctuous bodies. To this ether are ascribed the principal phenomena of attraction and repulsion, the light, the sulphureous or rather phosphoric smell with which violent electricity is always attended, and other sensible qualities, are ascribed to the grosser particles of bodies driven from them by the forcible action of this ether. He also endeavours to explain many electrical phenomena by means of a subtle medium at the surface of bodies; which is the cause of the refraction and reflection of the rays of light, and also resists the entrance and exit of this ether. This medium, he says, extends to a small distance from the body, and is of the same nature with what is called the *electric fluid*. On the surface of conductors this medium is rare, and easily admits the passage of the electric fluid; whereas, on the surface of electrics, it is dense and resists it. The same medium is rarified by heat, which thus changes conductors

into non-conductors. By far the greater number of philosophers, however, rejected the opinion of Mr Wilson; and as they neither chose to allow the electric fluid to be fire nor ether, they were obliged to own that it was a fluid *sui generis*, the one of whose nature they were totally ignorant.

(171.) Mr CAVALLO assigns the following judicious reasons for rejecting this theory:—"As the identity of the electric and the ethereal is, it seems to me quite improbable, or rather idle and insignificant hypothesis; for this ether is not a real existing, but merely an *hypothetical* fluid, supported by different philosophers to be endued with different properties, and to be an element of several principles. Some suppose it to be the element of fire itself; others make it the cause of attraction; others again derive animal life from it, &c. but the truth is, that notwithstanding the essence, or properties, of this fluid, but the reality of its existence is absolutely uncertain."

(172.) "According to Sir ISAAC NEWTON'S supposition, this ether is an exceedingly subtle elastic fluid, dispersed through all the universe, and whose particles repel the particles of all matter. But on this supposition the electric fluid is different from ether; for although the former is subtle, and elastic, like the latter, yet (as HUNTER observes) it is not repulsive like ether, but attractive of all other matter."

(173.) But while philosophers were thus embarrassed in their electrical theories, a vast number of interesting phenomena were discovered by the discovery of a number of different electricians in different countries. Mr WINKLER observed, that if glass was rubbed on the inside, it would show strong appearances of electricity on the outside; which seemed to favour the opinion of the immutability of glass to the electric matter. Other German electricians used several globes at a time, and imagined they found effects proportionable; though this has long since been found a mistake. A prodigious force, however, could they exert by means of these globes whirled by a large wheel, and rubbed by the hand or with woollen cloth, that, according to their own accounts, could be drawn from a finger by means of an electric spark, the skin would burst, and a pain appear as if made by a caustic. If several tubes or tubes were used, they said, that the motion of the heart and arteries would be very perceptibly increased in such as were electrified; and if a vein was opened in these circumstances, the blood issuing from it would appear like lucid spheres, and run out faster than when the person was not electrified.

(174.) Mr P. GORDON, a Scots Benedictine monk, and professor of philosophy at Erfurd, increased the electric sparks to such a degree, that they were felt from a man's head to his foot, so that he could hardly take them without falling down with giddiness, and small birds were killed by them. This was effected by conveying the electricity with iron wires to the distance of 200 fathoms from the place of excitation. He also found that the sparks were stronger when the wires were thick than when they were small.

(175.) While the power of electricity was thus tried, another question of great importance was likewise decided, viz. Whether electricity acted according to the largeness of the surface of bodies? This was found to be in proportion to the surface, and not to the solid contents. The magnetic effluvia also were found not to interfere in the least with the electrical ones. An electrified loadstone attracted light bodies of all kinds by its electric virtue, at the same time that it attracted iron and steel by its peculiar magnetic virtue. The attractive virtue of electricity was also found to pervade glass so powerfully, that a thread was attracted through five exhausted receivers, and seemingly with more vigour than it would have been by the excited tube alone in the open air.

(176.) Such was the state of philosophical opinions concerning electricity, when Dr FRANKLIN first invented his theory concerning positive and negative, or *plus* and *minus*, electricity. This had been already suggested by Dr Watson, but was not so fully explained by him as by Dr Franklin; on which account the latter is generally reckoned to be the sole inventor. According to this theory, all the operations in electricity depend upon one fluid *sui generis*, extremely subtle and elastic. Between the particles of this fluid there subsists a very strong repulsion with regard to each other, and as strong an attraction with regard to other matter. Thus, according to Dr Franklin's hypothesis, one quantity of electric matter will repel another quantity of the same, but will attract and be attracted by any terrestrial matter that happens to be near it. The pores of all bodies are supposed to be full of this subtle fluid; and when its equilibrium is not disturbed, that is, when there is in any body neither more nor less than its natural share, or than that quantity which it is capable of retaining by its own attraction, the fluid does not manifest itself to our senses. The action of the rubber upon an electric disturbs this equilibrium, occasioning a deficiency of the fluid in one place, and a redundancy of it in another. This equilibrium being forcibly disturbed, the mutual repulsion of the particles of the fluid is necessarily exerted to restore it. If two bodies be both overcharged, the electric atmospheres repel each other, and both the bodies recede from one another to places where the fluid is less dense. For as there is supposed to be a mutual attraction between all bodies and the electric fluid, such bodies as are electrified must go along with their atmospheres. If both the bodies are exhausted of their natural share of this fluid, they are both attracted by the denser fluid existing either in the atmosphere contiguous to them, or in other neighbouring bodies; which occasions them still to recede from one another as if they were overcharged.

(177.) This is the FRANKLINIAN DOCTRINE concerning the cause of electric attraction and repulsion; but the reason given why bodies negatively electrified ought to repel one another, is not satisfactory. Dr Franklin had framed his hypothesis before he knew that bodies negatively electrified would repel one another; and when he afterwards learned it, he acknowledged that he could not satisfactorily account for it. Other

philosophers therefore invented different solutions of this difficulty, of which that above mentioned is one. But by some this was rejected. They said, that as the denser electric fluid, surrounding two bodies negatively electrified, acts equally on all sides of those bodies, it cannot occasion their repulsion. The repulsion, according to them, is owing rather to an accumulation of the electric on the surfaces of the two bodies; which accumulation is produced by the attraction, and the difficulty the fluid finds in entering them. This difficulty is supposed chiefly to be owing to the air on the surface of bodies, which Dr PRIESTLEY says is probably a little condensed there. This he deduces from an experiment of Mr Wilson, corrected by Mr Canton. The experiment was made in order to observe the course of the electric light through a Torricellian vacuum. A singular appearance of light was observed upon the surface of the quicksilver, at which the fluid was supposed to enter. Mr Wilson supposed that this was owing to a subtle medium spread over the surface of the quicksilver, and which prevented the easy entrance of the electric fluid. But this was afterwards discovered by Mr Canton to be owing to a small quantity of air which had been left in the tube. It is plain, however, that as the attraction is equal all round, and likewise the difficulty with which the fluid penetrates the air, bodies negatively electrified ought not to repel one another on this supposition more than the former. Nay, they ought to attract each other; because, in the place of contact, the resistance of the air would be taken off, and the electric fluid would come from all other quarters by the attraction of the bodies.

(178.) Mr CAVALLO gives another reason why bodies negatively electrified should repel each other, in a chapter intitled "A Compendious View of the principal properties of Electricity." "No Electricity (says he) can be observed upon the surface of any electrified body, except that surface is contiguous to an electric, which electric can somehow or other acquire a contrary electricity at a little distance. Otherwise,—No electricity can appear upon the surface of any electrified body, except that surface is opposite to another body which has actually acquired the contrary electricity, and these contrarily electrified bodies are separated by an electric." "On considering this principle, (adds he in a note), it may be asked, Why an electricity can be observed upon the surface of an electrified body that is insulated at a considerable distance from other conductors? Or, Which is the electric that is contiguous to the surface of an electrified conductor or excited electric, and which has actually acquired a contrary electricity at a little distance from the said surface? To this question it is answered, that the air is, in general, the electric which is opposite to the surface of any electrified body; which, not being a perfect conductor, does easily acquire a contrary electricity on a stratum of its substance that is at a little distance from the electrified body; and, in consequence of this stratum, it acquires another stratum contrarily electrified, and at a little distance from the former: to this other strata succeed, alternately possessed

of positive and negative electricities, and decreasing in power till they vanish. This assertion easily proved by several experiments, particularly the following. If the end of a pretty long glass tube be presented to a body electrified, for instance, positively, the tube will be found electrified positively also for the space of one or two inches at that end; but beyond that space, will found 2 or 3 inches electrified negatively: so that another positive electricity will appear; so alternately, a positive and a negative zone follow one another, always weaker and weaker power, till at last they quite vanish. This fact, in general, when an electric sufficiently distant is presented to an electrified body, it acquires cessive zones or strata of positive and negative electricity."

(179.) From this fact, Mr Cavallo gives the following reason why bodies negatively electrified repel one another. "As to the repulsion existing between bodies possessed of the same electric in order to understand its explanation thoroughly, the reader must be reminded of the principle above mentioned, which is, that no electricity, *i. e.* the electric fluid proper to a body, can be augmented or diminished upon the surface of that body, except the said surface is contiguous to an electric, which can acquire a contrary electricity at a little distance: from whence it follows that no electricity can be displayed upon the facing surfaces of two bodies that are sufficiently near to one another, and both possessed of the same electricity; for the air that lies between contiguous surfaces has no liberty of acquiring any contrary electricity. This being premised, the explanation of electric repulsion becomes easy. Suppose, for instance, that two small bodies are freely suspended by insulated threads, that, when they are not electrified, they hang contiguous to one another. Now suppose these bodies to be electrified either positively or negatively, and then they must repel one another, for either the increased or the diminished quantity of electric fluid in these bodies will endeavour to diffuse itself equally over every part of the surfaces of these bodies; and this endeavour will cause the said bodies to recede from each other, so that a quantity of air may be interposed between their surfaces, sufficient to acquire a contrary electricity at a little distance from the said surfaces: Otherwise, If the bodies possessed of the same electricity do not repel each other, so that sufficient quantity of air may be interposed between their surfaces, the increased quantity of electric fluid when the bodies are electrified positively, or the remnant of it when they are electrified negatively, by the above principle, cannot be diffused equally throughout or over the surfaces of these bodies; for no electricity can appear upon the surfaces of bodies in contact, that are very near each other. But the electric fluid, by attracting the particles of matter, endeavours to diffuse itself equally throughout or over the surfaces of these bodies; therefore the said bodies are, by this endeavour, forced to repel one another."

(180.) "This theory (says Mr TYTLER) is certainly no solution of the difficulty; seeing it

explaining one fact by another, which requires explanation at least as much as the first. Although this should be overlooked, it is still sufficient; for, granting that bodies negatively electrified ought to repel one another till the electricity is equally diffused along their surfaces, yet when this is accomplished, the repulsion ought to cease. Now, there is no occasion for supposing the bodies to be electrified while they are in contact, or nearly so. One may be electrified negatively in one corner of a room, and another in the other. The electrification may also be continued any length of time we please, so that it is not possible to suppose but the electric matter must be diffused itself equally along the surfaces of both: yet, if we attempt to bring these bodies together, we shall find that they repel each other violently; which ought not to be the case, according to Mr Cavallo's supposition.

(183.) What gave the greatest reputation to Franklin's theory, however, is the easy solution which it affords to all the phenomena of the Leyden phial. The fluid is supposed to move in the greatest ease in bodies which are conductors, but with extreme difficulty in *electrics perfect*, inasmuch that glass is absolutely impermeable. It is moreover supposed, that all electrics, and particularly glass, on account of the smallness of their pores, do at all times contain an extreme great, and always an equal quantity of electric fluid; so that no more can be thrown into any part of any electric substance, except the quantity go out at another, and the gain be equally equal to the loss. These things being previously supposed, the phenomena of charging and discharging a plate of glass admit of an easy solution. In the usual manner of electrifying by a smooth glass globe, all the electric matter is supposed by the rubber from all the bodies which communicate with it. If it be made to communicate with nothing but one of the coatings of a Leyden phial, while the conductor communicates with the other, that side of the glass which communicates with the rubber must necessarily be exhausted in order to supply the conductor, which it conveys the whole of it to the side with which it communicates. By this operation, therefore, the electric fluid becomes almost entirely exhausted on one side of the plate, while it is as much accumulated on the other; and the discharge made by the electric fluid rushing, as soon as opportunity is given it by means of proper conductors, from the side which was overloaded, till it is exhausted.

(184.) It is not, however, necessary to this theory, that the very same individual particles of electric matter which were thrown upon one side of the plate, should make the whole circuit of the intervening conductors, especially in very great spaces, so as actually to arrive at the exhausted side. It may be sufficient to suppose, that the additional quantity of fluid displaces and occupies the space of an equal portion of the natural quantity of fluid belonging to those conductors in the circuit, which lay contiguous to the charged side of the glass. This displaced fluid may drive towards an equal quantity of the same matter in the next conductor: and thus the progress may

continue till the exhausted side of the glass is supplied by the fluid naturally existing in the conductors contiguous to it. In this case, the motion of the electric fluid, in an explosion, will rather resemble the vibration of the air in sounds, than a current of it in winds.

(185.) It will soon be acknowledged (says Dr Priestley), that while the substance of the glass is supposed to contain as much as it can possibly hold of the electric fluid, no part of it can be forced into one of the sides, without obliging an equal quantity to quit the other side: but it may be thought a difficulty upon this hypothesis, that one of the sides of a glass plate cannot be exhausted, without the other receiving more than its natural share; particularly, as the particles of this fluid are supposed to be repulsive of one another. But it must be considered, that the attraction of the glass is sufficient to retain even the large quantity of electric fluid which is natural to it, against all attempts to withdraw it, unless that eager attraction can be satisfied by the admission of an equal quantity from some other quarter. When this opportunity of a supply is given, by connecting one of the coatings with the rubber, and the other with the conductor, the two attempts to introduce more of the fluids into one of the sides are made, in a manner, at the same instant. The action of the rubber tends to disturb the equilibrium of the fluid in the glass; and no sooner has a spark quitted one of the sides, to go to the rubber, than it is supplied by the conductor on the other; and the difficulty with which these additional particles move in the substance of the glass, effectually prevents its reaching the opposite exhausted side. It is not said, however, but that either side of the glass may give or receive a small quantity of the electric fluid, without altering the quantity on the opposite side. It is only a very considerable part of the charge that is meant, when one side is said to be filled while the other is exhausted.

(186.) It is a little remarkable, adds Dr Priestley, that the electric fluid, in this and in every other hypothesis, should so much resemble the ether of Sir ISAAC NEWTON in some respects, and yet differ from it so essentially in others. The electric fluid is supposed to be, like ether, extremely subtle and elastic, that is, repulsive of itself; but instead of being, like the ether, repelled by all other matter, it is strongly attracted by it: so that, far from being, like the ether, rarer in the small than in the large pores of bodies, rarer within the bodies than at their surfaces, and rarer at their surfaces than at any distance from them; it must be denser in small than in large pores, denser within the substance of bodies than at their surfaces, and denser at their surfaces than at a distance from them.

(187.) To account for the attraction of light bodies, and other electrical appearances, in air of the same density with the common atmosphere, when glass (which is supposed to be impermeable to electricity) is interposed; it is conceived, that the addition or subtraction of the electric fluid, by the action of the excited electric on one side of the glass, occasions, as in the experiment of the Leyden phial, a subtraction or addition of the fluid

on the opposite side. The state of the fluid, therefore, on the opposite side being altered, all light bodies within the sphere of its action must be affected in the very same manner as if the effluvia of the excited electric had actually penetrated the glass, according to the opinions of all electricians before Dr Franklin.

(186.) 'This hypothesis has been in some measure improved by Mr *ÆPINUS*, in a treatise intitled, *Tentamen Theoriæ Electricitatis & Magnetismi*. He extends the property of impermeability to air, and all electric, as well as glass. He supposes *impermeability* to consist in the great difficulty with which electric substances admit the fluid into their pores, and the slowness with which it moves in them. In consequence of this impermeability of air to the electric fluid, he denies the existence of electric atmospheres, and thinks that Dr Franklin's theory will do much better without them. He also imagines, that all the particles of matter are repulsive of one another: for that otherwise (since all substances have in them a certain quantity of the electric fluid, the particles of which repel one another and are attracted by all other matter,) it could not happen that bodies in their natural state with respect to electricity, should neither attract nor repel one another. He also introduces a number of mathematical calculations; the result of which (says Dr Priestley, with a great deal of probability) cannot be depended upon.'

(187.) The above is a full explanation of the theory of electricity at present most generally received. It depends on the following principles. 1. All terrestrial substances, as well as the atmosphere which surrounds the earth, are full of electric matter. 2. Glass, and other electric substances, though they contain a great deal of electric matter, are nevertheless *impermeable* by it. 3. This electric matter violently repels itself, and attracts all other matter. 4. By the excitation of an electric, the equilibrium of the fluid contained in it is broken; and one part of it is overloaded with electricity, while the other contains too little. 5. Conducting substances are permeable to the electric matter through their whole substance, and do not conduct it merely over their surface. 6. Positive electricity is when a body has too much of the electric fluid, and negative electricity when it has too little.

(188.) Of the first of these principles, the proofs are very easy. There is no place of the earth or sea, where the electric fire may not be collected by making a communication between it and the rubber of an electric machine. Therefore, considering that the whole earth is moist, that moisture is a conductor of electricity, and that every part of the earth must thus communicate with another, it is certain that the electric matter must diffuse itself as far as the moisture of the earth reaches; and this we may reasonably suppose to be to the very centre. With regard to the atmosphere, the case is equally clear. Dr Franklin, and others, collected electricity from the atmosphere in great quantity during the time of thunder storms; but it is now found that it may be collected from the air at any time. The best in-

strument for this purpose is the electrical key. See SECT. XI. PART III.

(189.) But though the first principle in the Franklinian theory appears to be incontrovertible, yet formidable objections have been brought against the other five. Room permits us not to enumerate those urged against the whole doctrine by Mr *EELS*, *ADAMS*, and the other adherents of vitreous and resinous system. But the following urged by Mr Tytler, in the *Encyclopædia Britannica*, who adopts a system quite different, merit particular attention, as they seem to be very weighty if not unanswerable.

(190.) 'The 2d position,' (says he) 'required for establishing Dr Franklin's theory is, "That glass and other electric substances, though they contain a great deal of electric matter, are nevertheless *impermeable* by it." This assertion evidently has a contradictory appearance. It is difficult, if not impossible, to conceive, that a substance can be full of a fluid, and yet impermeable by that fluid; especially when we continue to talk of putting in an additional quantity into it, and taking out of the other. Nay, we still more extraordinary, the thinner the glass is, i. e. the less quantity of electric matter it contains, the more we are able to put into it; for the thinner a glass is, the more easily does it receive high charge.'

(191.) 'The chief arguments for the impermeability of glass by the electric fluid are drawn from the phenomena of the Leyden phial. It is very plain, that there is in that case an explosion of fire from the outside at the same time that it is thrown upon the inside. This appears from a number of experiments, but is most readily observed in the following. Let a coated phial be set in an insulating stand, and the knob of another brought near the coating of the first. As soon as the electric sparks are discharged from the prime conductor to the knob of the first, an equal number will be observed to proceed from the coating of the first to the knob of the second. This is very remarkable, and an unphilosophical observer will scarce ever fail to conclude, that the fire runs directly through the substance of the glass. Dr Franklin, however, concludes the contrary, because there is found a very great accumulation of electricity on the inside of the phial, which discovers itself by a violent flash and explosion when a communication is made between the outside and inside coatings. But it must be observed, that there is here no other reason for concluding the glass to be impermeable, except that we suppose the electric matter to be accumulated on one side of the glass, and deficient on the other. If this supposition therefore cannot be proved, the evidence of sense, which indeed is very strong in favour of the permeability, must undoubtedly preponderate. It is said, indeed, that if the glass was permeable by the electric matter, a phial would be discharged immediately after being charged, or rather could never be charged at all, because the matter would no sooner be thrown upon one side than it would fly off from the other. This supposition, however, depends entirely upon the above-mentioned one, namely, that in bodies

slowly electrified there is an *accumulation*, and such as are *negatively* electrified there is a *deficiency* of fluid; which never can be proved.

(194.) Another argument against the permeability of glass and other electric is, that coated with it is said, standing upon electric substances, cannot be charged. This, however, seems to be very much exaggerated. A phial, though ever so thickly insulated, will always receive a charge from a machine that acts very powerfully. Nay, it is certain, that though a phial is placed in such a manner, that both its knob and outside coating are in contact with the prime conductor, it will still receive a charge; much less indeed in this case than in any other, but still the shock will be perceptible.

(195.) In 1759, Mr Wilson read a paper before the Royal Society, in which the permeability of glass by the electric fluid was asserted. The arguments from which he deduced this conclusion were the following. He took a very large plate of glass, a little warmed; and holding it up by one edge, while the opposite edge rested on wax, he rubbed the middle part of the surface with his finger, and found both sides electrified. He accounted for this from the electric fluid passing through the glass from his finger to the opposite side. But here Dr Priestley objects, that on Franklin's principles it ought to be, if one side be rubbed by the finger, it attracts from it some electrical fluid. This being done on the glass as far as the rubbing extended, there is an equal quantity of that contained in the middle of the glass, and drives it out on that side, where it stands as an atmosphere, so that both sides are found positively electrified. Mr Wilson also tried another experiment, which seemed more decisive than the former: Having by him a plate of glass, one side of which was rough and the other smooth, he rubbed it slightly on one side; upon doing which, both sides were electrified.

This also Dr Priestley attempts to reconcile with Franklin's hypothesis. "As the electric fluid, contained in the glass (says he), is equal in both sides by the common repulsion; the quantity in one side is diminished, the fluid on the other side, being less repelled, retires inward, and leaves that surface also minus." But it is impossible to avoid observing, that Dr Priestley's own words, in the strongest manner, are against the doctrine he means to establish. The quantity of fluid in one side being diminished, that on the other, he says, *retires inward*. Into what does it retire? If into the substance of the glass, then the glass is undoubtedly permeable by it; and this is the very thing which Dr Priestley argues against.

(196.) The proofs (says Mr Tytler,) of Dr Franklin's 3d position, that "The electric matter repels itself, and attracts all other matter," are chiefly derived from the following experiment, and others of a similar kind. Let a small piece of metal be insulated, and bring an electrified glass tube near one end of it. A spark of positive electricity will be obtained from the other end; after which, if the tube is suddenly removed, the metal becomes electrified negatively. Here, then, it is said, is a plain repulsion of one part of the electric fluid by another. That contained in

the tube repels the fluid contained in the nearest end of the metal; of consequence it is accumulated in the other end, and when the tube is removed, the metal is found to be deprived of part of its natural quantity of electricity, or is electrified negatively.—On such experiments as this, however, it is obvious to remark, that we ought first to prove that positive electricity consists in an accumulation, and negative electricity in a deficiency, of the electric fluid. But while this is only *supposed*, it is impossible that any proofs drawn from the supposition can be conclusive.

(195.) The Dr's 4th position, that "By the excitation of an electric, the equilibrium of the fluid contained in it is broken, and one part is overloaded with electricity, while the other contains too little," Mr Tytler observes, "is entirely hypothetical. No electrician hath yet explained, in a satisfactory manner, how the fluid is procured by the excitation of glass or any other electric substance. Dr Priestley, instead of giving an explanation, proposes several queries concerning it. Mr Cavallo tells us, that the act of excitation pumps as it were the electric fluid from the rubber, and consequently from the earth. He adds, "By what mechanism one body extracts the electric fluid from another, is not yet known. The celebrated Father Beccaria supposes, that the action of rubbing increases the capacity of the electric, i. e. renders that part of the electric which is actually under the rubber, capable of containing a greater quantity of electric fluid: hence it receives from the rubber an additional share of fluid, which is manifested upon the surface of the electric, when that surface is come out from the rubber; in which state it loses, or, as it were, contracts its capacity. Signior Beccaria's experiment to prove this supposition is the following. He caused a glass plate to be rubbed by a rubber applied on one side of the plate, while it was turning vertically; and holding at the same time a linen thread on the other side of the plate just opposite to the rubber, he observed that the thread was not attracted by that part of the glass which corresponded to the rubber, but by that which was opposite to the surface of the glass that had just come out from the rubber; which shows, that the fluid acquired by the glass plate did not manifest its power until the surface of the glass was come out from the rubber." But from this experiment says Mr Tytler, "it seems impossible to draw any conclusion concerning the capacity of glass either one way or other. It is evident, the more, that whatever parts of Dr Franklin's hypothesis rest on this supposition concerning excitation, are entirely void of evidence."

(196.) Dr FRANKLIN'S 5th position is, that "Conducting bodies are permeable by the electric fluid through the whole of their substance, and do not conduct it merely over their surface." The proof (says Mr Tytler,) most commonly adduced in favour of this position, is the following experiment: "Take a wire of any kind of metal, and cover part of it with some electric substance, as resin, sealing wax, &c. then discharge a jar through it, and it will be found that it conducts as well with as without the electric coating. This, says Mr Cavallo, proves that the electric matter

passes through the substance of the metal, and not over its surface. A wire, adds he, continued through a vacuum, is also a convincing proof of the truth of this assertion." 'Even here, however,' Mr Tytler argues, 'the proof, if impartially considered, will be found very defective. It is a fact agreed upon by all philosophers, that bodies which to us are apparently in contact, do nevertheless require a very considerable degree of force to make them actually touch one another. Dr Priestley found that a weight of 6 lb. was necessary to press 30 shillings into close contact, when lying upon one another on a table. A much greater weight was necessary to bring the links of a chain into contact with each other. It cannot be at all incredible, therefore, that a wire, though covered with sealing-wax or rosin, should still remain at some little distance from the substance which covers it. The following experiments of Dr Priestley also seem to be much in favour of the supposition that the electric fluid passes chiefly over the surface of conducting substances.'

(197.) "From the very first use of my battery, (says he,) I had observed a very black smoke or dust to arise on every discharge, even when no wire was melted; and the brass chain I made use of was of a considerable thickness. I observed, that a piece of white paper, on which lay the chain I was using to make the discharge, was marked with a black stain, as if it had been burnt, wherever it had touched it. I neglected the experiment, till, some time after, observing a very striking appearance of the same kind, I was determined to attend to the circumstances of it a little more particularly. I made my chain very clean, and wrapping it in white paper, I made a discharge of about 40 square feet through it, and found the stain wherever it had touched the paper. Some time after I wrapped the paper, in the same manner, round a piece of brass wire; but, making a discharge through it, saw no stain. To ascertain whether this appearance depended upon the discontinuity of the metallic circuit, I stretched the chain with a considerable weight, and found the paper on which it lay, as the shock passed through it, hardly marked at all. Finding that it depended upon the discontinuity, I laid the chain upon white paper, making each extremity fast with pins stuck through the links; and when I had made the discharge, observed that the black stains were directly opposite to the body of the wire that formed the chain, and not to the intervals, as I had sometimes suspected. A chain 3 feet 4 inches long, which weighed 1 oz. 17 penny-weights 4 grains, lost exactly half a grain after each discharge.

(198.) "In making the mark above-mentioned, I once happened to lay the chain so as to make it return at a sharp angle, in order to impress the form of a letter upon the paper; and observed, that on the discharge, the part of the chain that had been doubled was displaced, and pulled about 2 inches towards the rest of the chain. At this I was surprised, as I thought it lay so, that it could not slide by its own weight. Upon this I repeated the experiment with more accuracy. I stretched the whole chain along a table, laying it double all the way, and making it return by a very sharp

angle. The consequence always was, that the chain was shortened about two inches, and sometimes more, as if a sudden pull had been given to it by both the ends. Suspecting that the black smoke which rose at every discharge, might come not from the chain, but from the paper, or the table on which it lay, and which was probably burnt by the contact of it, I let the chain hang freely in the air; but, upon making the discharge I observed the same gross black smoke that had before risen from the paper on the table. Fig. Plate CXXV. represents the spots made upon the paper by a chain laid over it. The breadth of the spots is about the mean thickness of the wire of the chain, and *a b* marks the place to which the part of the chain which returned was thrown back by the discharge.

(199.) "Being willing to try what would be the effect of laying the chain in contact with non-conductors, I dipped it in melted rosin till it had got a coating of considerable thickness. When it was quite stiff, I laid it carefully, without bending, upon white paper, and made the discharge through it. The rosin was instantly dispersed from all the outside of the chain, it being left as clean as when it had ever been put on. That with which the holes in the chain had been filled having been expelled in almost all directions, was beaten to powder; which, however, hung together but was perfectly opaque; whereas it had been quite transparent before this stroke. I next laid the chain upon a piece of glass, which was marked in the most beautiful manner wherever the chain had touched it; every spot the width and colour of the link. The metal might be scraped off the glass at the outside of the marks; but in the middle part was forced within the pores of the glass. On the outside of this metallic tinge was the black dust which was easily wiped off."

(200.) "From these experiments it would seem that the electrical flash had passed over the surface of the chain rather than through its substance, seeing it threw off the rosin with such extreme violence. The same thing appears from the manner in which electricity generally acts, which is not according to the solid contents of any substance, but according to the dimensions of its surface. It is not to be doubted, however, but that where a great quantity of electric matter is made to pass along a very small wire, it will enter the substance of the metal. This appears from the possibility of melting wires by the force of electric batteries, and even totally dissipating them into small globules. To accomplish this, it is only necessary to connect the hook communicating with the outside coating of a battery, containing at least 30 square feet of coated surface, with a wire that is about one 50th part of an inch thick and about two feet long. The other end of it must be fastened to one end of the discharging rod: this done, charge the battery; and then by bringing the discharging rod near its wires, send the explosion through the small wire, which by this means will be made red hot and melted, so as to fall upon the floor in different glowing pieces. When a wire is melted in this manner, sparks are frequently seen at a considerable distance from it which are red hot particles of the metal, that, by the

Fig. 2. Fig. 3.

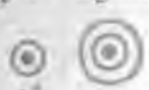


Fig. 4. Fig. 8.



Fig. 11.

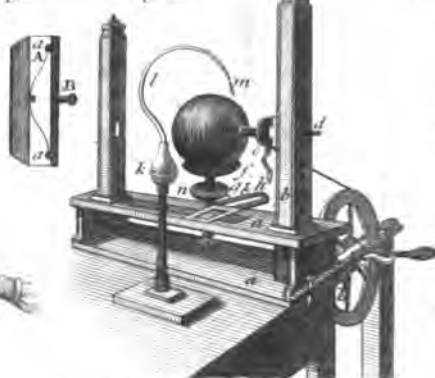


Fig. 7.



Fig. 5.



Fig. 6.



Dr Priestley's Machine.

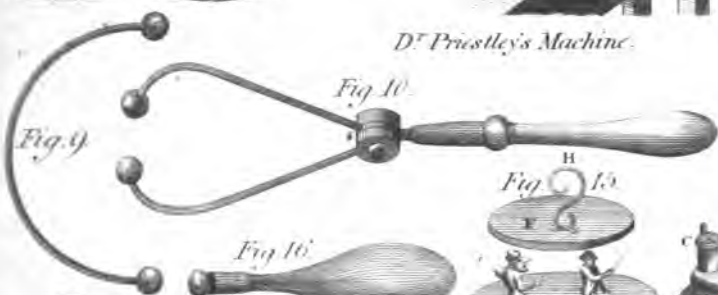


Fig. 16.



Fig. 13.

Mr Read's Machine.



Fig. 15.

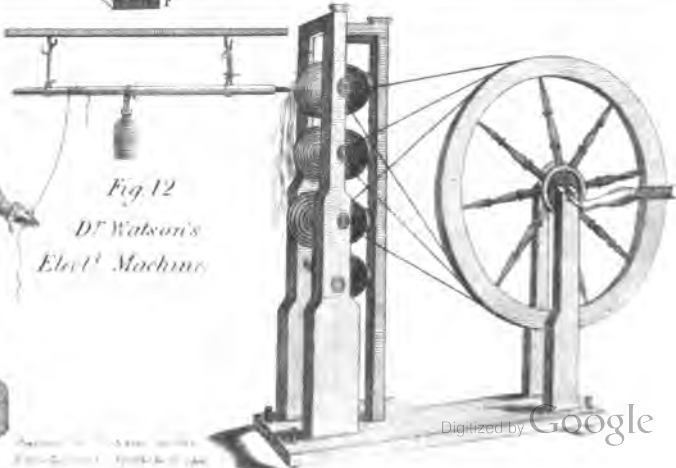


Fig. 14.



Fig. 12.

Dr Watson's Electrostatic Machine.





the violence of the explosion, are scattered in all directions. If the force of the battery is very great, the wire will be entirely dispersed by the explosion, so that none of it can be afterwards used. If it is required to melt such particles as cannot easily be drawn into wires, ores, for instance, or grain gold, they may be set in a train with a piece of wax: they are then to be put into the circuit, and an explosion sent through them, which, if sufficiently strong, will melt them as well as the wires. If a wire is stretched by weights, and a shock is sent through it which renders it just too hot, the wire, after the explosion, is found to be considerably lengthened.

(301.) The last position on which Dr FRANKLIN'S theory depends, and which indeed may be said to be the foundation of the whole, is, "That electric fluid is an accumulation, or too great quantity of electric matter contained in a body; negative electricity is when there is too little." Of this, however," (says Mr Tytler,) "there is no solid proof; and all attempts that have hitherto been made to prove it, are only arguing in a circle, or proving the thing by itself. Thus, for instance, a body electrified positively, attracts that which is electrified negatively; because the first has too much, and the other too little, electric fluid. But how do we know that one has too much, and the other too little, electricity? Because they attract each other. Again it has been said, that when a phial is electrified positively, it is as if a constant stream of fire from the outside coating, as there is from the conductor to the inside coating. Therefore, it is said, the outside of the glass has too little, and the inside too much, electricity. But how is this known to be true? Because glass is impermeable by the electric fluid. And how is glass known to be impermeable? Because, in the above experiment, the inside has too much, and the other too little, electricity. Thus in every instance, the arguments of Dr Franklin's hypothesis return into themselves, and no conclusion can be drawn from them." (302.) These arguments of Mr Tytler's, if not conclusive, at least merit the attention of Mr CAMDEN, and the other supporters of the Franklinian theory. We by no means consider ourselves as qualified to decide the question on either side; but readers will judge for themselves.

SECT. II. Of the NATURE of the ELECTRIC FLUID.

(303.) The first electricians, observing the similarity between the electric matter and fire, naturally concluded that it was no other than elementary fire, which pervaded all substances. This, however, was objected to; and the principal objection was, that though the electric matter emitted light, and had the appearance of fire, it nevertheless wanted its most essential quality, namely, heat. In particular, the blast which comes from an electrified point, feels cold instead of being hot; and where great quantities of the fluid are forced with violence through certain substances, and thus set them on fire, it was thought that the fire might be occasioned by the internal commotion excited among their small particles.

(304.) This objection, however, seems now to be totally removed. The dispute concerning the

preferable utility of pointed or knobbed conductors for securing buildings from lightning, occasioned the fitting up of a more magnificent apparatus than had ever appeared before. An immense conductor was constructed at the expense of the board of ordnance, and suspended in the *Pantheon*. It consisted of a great number of drums covered with tin-foil, which formed a cylinder of above 155 feet in length, and more than 16 inches in diameter; and to this vast conductor were occasionally added 4800 yards of wire. The electric blast from this machine fired gun powder in the most unfavourable circumstances that can be imagined, namely, when it was drawn off by a sharp point, in which case it has generally less force than any other. The method of doing this was as follows. Upon a staff of baked wood a stem of brass was fixed, which terminated in an iron point at the top. This point was put into the end of a small tube of Indian paper, made somewhat in form of a cartridge, about an inch and a quarter long, and two tenths of an inch in diameter. When the cartridge was filled with common gunpowder, unbruised, a wire communicating with the earth was then fastened to the bottom of the brass stem. The charge in the great cylinder being continually kept up by the motion of the wheel, the top of the cartridge was brought very near the drums, so that it frequently even touched the tin-foil with which they were covered. In this situation a small faint luminous stream was frequently observed between the top of the cartridge and the metal. Sometimes this stream would set fire to the gun-powder the moment it was applied; at others, it would require half a minute or more before it took effect. But this difference in time was supposed to be owing to some small degree of moisture in the powder or the paper, which was always unfavourable to the experiment. Tinder was fired much more readily.

(305.) "As it therefore appears, (says Mr Tytler) that the electric fluid, when it moves through bodies either with great rapidity, or in very great quantity, will set them on fire, it seems scarce disputable, that this fluid is the same with the element of fire. (See the articles FIRE and HEAT; also CHEMISTRY, Index.) This being admitted, the source from whence the electric fluid is derived, into the earth and atmosphere, must be exceedingly evident, being no other than the sun, or source of light itself. The vast quantity of light which continually comes from him to the earth, must of necessity be absorbed by that opaque body, at least in great part. It is impossible it can remain there, because there is a perpetual succession of new quantities coming from the sun. It must be observed, however, that as this fluid receives a great number of different directions after once it enters the earth, it cannot appear in its natural form of fire or light, till it receives a new motion, similar to what it had when proceeding from the sun. The solar light only burns, or produces heat, when diverging from a centre, or converging towards one. The heat is always greatest at the central point; and even there, no heat is produced, except where the light passes through a resisting medium. In those cases likewise the electric fluid burns. When discharged

charged with violence from an electrified bottle, it flies out on all sides, and then will fire gun-powder, or other combustible substances. The same thing it will do when converging towards a point, if in sufficient quantity, as was observed in the experiment with the large conductor above mentioned.

(206.) 'But when the electric fluid neither meets with any considerable resistance, diverges from a centre, nor converges towards one, it is almost always invisible, and without heat. A most remarkable proof of this we have, even when a vast quantity of electric matter is forced through a very small wire. Dr Priestley tells us he had once an opportunity of observing what part of the conductors which form an electric circuit are most affected by the explosion. Upon discharging a battery of 51 square feet through an iron wire nine inches long, the whole of it was glowing hot, and continued so for some seconds. The middle part grew cool first, while both the extremities were sensibly red. When the wire was afterwards examined, both the extremities were found quite melted; an inch or two of the part next to them was extremely brittle, and crumbled into small pieces on being handled; while the middle part remained pretty firm, but had quite lost its polish, so that it looked darker than before. This is precisely what would have happened, had both ends been put into a common fire. We are very sure, that the same quantity of electric matter passed through the middle of the wire, that entered one end of it and went out at the other. Why then did it not produce the same degree of heat in the middle that it did at each end? The reason is plain: At one end it was in a state of *convergence* from the battery to the point of the wire; at the other, it was in a state of *divergence* from the point of the wire to the battery. At the points, therefore, an intense heat was produced; but in the middle, where the fluid neither converged nor diverged, but moved forwards in a parallel direction, the heat was much less. Now we know that this is the case with the solar light itself. At the focus of a burning glass there is an intense heat both where the convergence ends and the divergence begins. But where this divergence considerably ceases, and the motion of the light becomes more parallel, the heat is vastly diminished.

(207.) 'The case is the same with a common fire, and with all burning bodies; for heat never acts but from a centre, and is always greatest at the central point. It is true, that we can never produce electric fire without at the same time producing a violent shock exceedingly different from the burning of common fire. But the reason of this is, that we cannot produce a divergence in a stream of electric matter, without at the same time giving it such a motion in some other direction, that its impetus becomes very perceptible. If it was in our power to make the flash produced by an electric bottle keep its place, we cannot suppose that any shock, or other sensation than heat, would be felt. But there is no possibility of hindering it from flying with prodigious celerity from one side of the bottle to the other. Therefore, as it is neither in a state of divergence nor convergence, except where it comes out from and enters into the bottle; no sensation

is perceived except what arises from its change of place; and hence it is said, that the electric matter hath no heat.

(208.) 'The only objection of any strength which can arise to the identity of the electric fluid with light, is the surprising ease with which the latter penetrates glass, and the seeming stop which is put to the motions of the former when a piece of glass or any other electric substance is placed to it. Here, however, it must be observed, that light, as proceeding from a luminous body, is regulated by very different laws from that which is absorbed by opaque bodies, and consequently subjected to motions quite different from what it originally had. Water, the only fluid with which we are very well acquainted (the same laws we know seem to be regulated by the same laws), is capable of two very different motions. The one, is a rectilinear one, by which great quantities of it run from one place to another. The other is not so easily explained, may, however, be very readily observed, by throwing a small stone into a pool of water. A great number of concentric circles will be propagated from the place where the stone fell, as from a centre, which will gradually grow larger and larger. If another stone is thrown in at some distance, similar circles will proceed from the place where it fell. These will meet with the former and cross them without interfering with either in the least. It is certain, however, that streams of water rushing opposite to one another would shatter and destroy each other. If, therefore, there is a difference in the motion of the electric fluid when it burns, and when it does (which there certainly is), we may easily suppose it possible, that glass should obstruct one kind of motion and not another: In which case, the fluid would seem to be permeable by the fluid, manifesting itself by the first kind of motion, but not so when it manifests itself by the other.

(209.) 'It hath commonly been thought, that the transparency of bodies depends upon the rectilinear direction of their pores, and opacity upon the situation of them in some other direction. Electrical experiments, however, have shown that this is not the case. Sealing wax and pitch, as opaque bodies as we are acquainted with; in Mr Hauksbee's experiments, (mentioned in § 13.) these substances were both rendered transparent by the action of the electric fluid. These experiments are confirmed by some others still more surprising, mentioned by Dr Priestley. One made by S. Beccaria. He discharged an electric shock through some brass dust sprinkled between two plates of sealing wax. The whole was perfectly luminous and transparent. The most extraordinary experiment, however, was made by Dr Priestley himself, of which he gives the following account. "I laid a chain in contact with the outside of a jar lightly on my finger, and sometimes kept at a small distance by means of a thin piece of glass; and, if I made the discharge at the distance of about three inches, the electric fire was visible on the surface of the finger, giving a sudden concussion, which seemed to make it vibrate to the very bone; and when it happened to pass on that side of the finger which was op-

to the eye; the whole seemed perfectly transparent in the dark."

(110.) Experiments of this kind, though they have not hitherto been much pursued by electricity, seem to be more worthy of notice than almost all others. One consequence which may be deduced from them is, that there is in bodies, whether electric or non-electric, a certain subtile fluid, on the motion of which transparency depends. That is, when the medium is at rest, the body is opaque; but when set in motion it becomes transparent. This motion, we see, may be set in two different ways. One is by simple vibration in *vacuo*, according to Mr Hauksbee's experiments. The other is, by sending the fluid of an electrified bottle over their surface. In Priestley's experiment, he could determine the motion to be of the vibratory kind; and hence may conclude, that some bodies may be conducted in such a manner, that they are capable of transmitting the vibrations of this fluid, but not of any other kind of motion. Such kind of bodies will be naturally transparent: but others, whose particles are disposed in such a manner, that the vibrations cannot be propagated through them without considerable violence, are naturally opaque.

(111.) The question then only is, What is this medium, the vibrations of which occasion transparency? It is scarce possible to answer this question in any other manner, than by saying, that it is the electric fluid. That it is this fluid which gives power to electric substances, has never been denied. That the motion of this fluid along the surfaces of bodies throws another fluid within into vibrations, is also evident from the experiments above mentioned. All bodies are considered to have much of this fluid in their pores: therefore, if a quantity of the same matter passes over the surface of any body, it must affect what is within its substance with a motion of some kind or other; because it affects that which lies on the outside, and this cannot fail to affect all the rest. The motion Dr Priestley's experiment determines to be of the vibratory or tremulous kind; and, indeed, it is natural to think it should be so. The vibrations of the electrical fluid, therefore, conduct light through opaque bodies. But whatever is conducted by the vibrations of another, it itself also vibrates while it is so conducted. Light, therefore, vibrates when emitted from luminous bodies. In the present case, these vibrations are originally occasioned by the electric fluid. They are conducted through opaque bodies by the vibrations of the electric fluid. The air is also full of the same fluid. The air is naturally transparent; but we have seen that transparency depends only in the transmission of a vibratory motion of the electric fluid. The light is perpetually conducted by means of the vibrations of the fluid; therefore, the vibrations of the electric fluid and light are the same; for no two fluids are always capable of setting one another in motion precisely in the same manner, unless their nature is in all respects exactly the same.

(112.) These experiments seem in the strongest manner to prove the identity of the electric fluid and light, and that both are transmitted through

electrics as well as other substances. The reason, therefore, of the seeming stop, which is observed in our electrical operations by the intervention of glass, is, that in all artificial electricity, the fluid has a very considerable progressive motion, which cannot be easily propagated through the solid substance of any body, especially where there is a pretty strong resistance on the other side.

SECT. III. Of the IDENTITY of the ELECTRIC FLUID with FIRE, LIGHT, and COLD.

(113.) Among the various hypotheses, which have been advanced concerning the nature of the electric fluid, that of Mr Tytler above quoted, proving it to be the same with the light of the sun, is far from being one of the most improbable. In another part of the *Encyclopædia Britannica*, he advances very plausible arguments to prove, that electricity is not only originally the same with LIGHT and FIRE, but, (what must appear still more surprising to ordinary readers,) ultimately the same with even the very opposite principle of COLD. We quote his arguments, on account of their originality, as well as of their plausibility.

(114.) "According to the present constitution of nature, (says he) we see that the distribution of heat is principally owing to the sun; and what we call its *quantity*, depends on the position of the sun with regard to terrestrial objects, and the length of time they are exposed to his rays. HEAT is not produced while the rays have a direct passage; and therefore fluids through which they pass easily, as air, are not heated by the rays of the sun. But when the rays are impeded in their course, and reflected in considerable quantity, a degree of heat takes place, which is always greater or less in proportion to the intensity of the rays. — In the reflecting substance, the heat will be comparatively greater in proportion to the quantity of rays which are absorbed or stopped in their course by it; but in any substance interposed betwixt the sun and the reflecting body, the heat is proportionable to the quantity of rays reflected. — Now it is plain, that when the particles of light fall upon any opaque substance, and enter its pores, which by their extreme subtilty they are well calculated to do, they must make an attempt to pass directly through it in their natural course; but as this cannot be done, they will push laterally, and in all directions, in consequence of being perpetually urged by the impulse of the light coming from the sun: and thus an action will be propagated in all directions as radii from a centre towards a circumference; which, when it takes place in that subtile fluid, always produces what we call *heat*.

(115.) "In contemplating the system of nature, we perceive three kinds of fluids of extreme subtilty, and very much resembling one another, viz. fire, light, and electricity. That it should be agreeable to vulgar conceptions to suppose these all to be ultimately the same, is not surprising; and on examining the evidence of their identity, it will certainly be found exceedingly strong. They all agree in the property of exciting the sensation of heat in certain circumstances, and in not doing so in others. Fire, we know, in the common acceptation of the word, always does so; but

but when it assumes the latent and invisible state, as in the formation of vapour, it lays aside this seemingly essential property, and the vapour is cold to the touch.—Light, when collected into a focus by a burning-glass, i. e. when its rays converge towards a centre, and diverge or attempt to diverge from one, produces heat also; and so does the electric fluid; for it has been found that the aura, converging from a very large conductor to the point of a needle, is capable of setting on fire a small cartridge of gunpowder, or a quantity of tinder, surrounding it. There seems also to be a connection betwixt fire and electricity in another way; for in proportion as heat is diminished, or the bodies are cooled, electricity succeeds in its place. Thus all electric bodies by heat become conductors of electricity, and cannot be excited or made to show any signs of containing that fluid; but as soon as the heat is removed, their electric property returns. Water is naturally a conducting substance: by being frozen, its conducting power is lessened, which shows an approach to electricity; and, by being cooled down to 20° below 0° of Fahrenheit, the ice actually becomes electric, and will emit sparks by friction like glass. The atmosphere is a natural electric: but by a certain degree of heat it loses this property, and becomes a conductor; nor is there any doubt that its electric properties are increased in proportion to the degree of cold imparted to it. In the winter time, therefore, we must consider the frozen surface of the earth, the water, and the atmosphere of the polar regions, as forming one electrical machine of enormous magnitude; for the natural cold of these countries is often sufficient to cool the water to more than 20° below 0° , and consequently to render it an electric. That this is really the case, appears from the excessively bright aurora borealis and other electric appearances, far exceeding any thing observed in this country. In the summer time however, no such appearances are to be seen, nor any thing remarkable except an excessive heat from the long continuance of the sun above the horizon. This quantity of heat then being succeeded by a proportionable quantity of electricity in winter, it is impossible to avoid concluding that the heat in summer becomes electric fluid in winter, which, going off through the celestial expanse, returns again to the grand source of light and heat from which it originally came; thus making room for the succeeding quantities which are to enliven the earth during the following summer.

(216.) "Thus the disappearance of heat in winter, and of electricity in summer, in these countries, will be very naturally and easily accounted for. It is true, that the phenomena of thunder and lightning show the existence of this fluid in vast quantities during the summer season: but these phenomena are only partial, and though formidable to us, are trifling in comparison with the vast quantities of electric matter discharged by the continual flashing of the aurora borealis, not to mention the fire balls and meteors called *falling stars*, which are very often to be seen in the northern countries. In the summer time, the air which is an electric, heated by the rays of the sun,

is excited or made to part with the fluid to the vapours contained in it; and it is the unequal or opposite electricity of the clouds to one another or to the earth, which produces the lightning. But in winter, when the air, earth, and vapour all become electric, they cannot discharge apart from one to another as before; but the whole, if one connected and vast electrified apparatus, discharges the matter almost in a continued fire for many months.

(217.) "From a consideration of these and other phenomena of nature, as well as of the experiments which have hitherto been made, we must consider fire in the abstract as an omnipresent fluid, of such subtilty as to pervade all terrestrial substances. When by any means it is made to diverge every way as from a centre, there operates as heat; expands, rarefies, or burns, according to the intensity of its action. Proceeds in straight and parallel lines, or such as diverge a little; it acts as light, and shows none of that power discoverable in the former case, though this is easily discoverable by making it converge into a focus. In a quiescent state, or where the motion is but little, it presses on the surfaces of bodies, contracts and diminishes them every way in bulk, forces out the expanding fluid within their pores, and then acts as cold. In this case also, being obliged to sustain the vehement action of the part of the fluid which is in motion, it flies with violence to every place where the pressure is lessened, and produces all the phenomena of Electricity."

(218.) "Under the article COLD, (Mr Tyndall adds elsewhere) it has been shown that cold as well as heat is a positive substance. In the present treatise it has been proved at length, that the electric fluid and the light of the sun are the same; the former being in truth no other than the latter, light absorbed by the earth, entangled among its particles, becoming subject to new laws, and acting in many cases as if it were a distinct fluid. Hence it becomes a proper antagonist to the light itself: for as the latter is only the fluid of electricity moving in a vibratory manner, and what we call electricity is the same fluid either in a comparatively stagnant situation, or disposed to run with violence from one place to another; it is plain that the motion of the light must be opposed to the fluid though stagnant, and much more if it is moving in any opposite manner. But the action of light when augmented is heat; the power which opposes it therefore, i. e. the electric fluid moving in an opposite direction, as above explained, cools itself; and hence the strong electric appearances in the atmosphere in cold countries, or in cold weather even in our own country. Heat also the electricity of the serene sky is weaker in summer than in winter; and combustion, which is a very strong vibratory action of the electric matter, produces no electricity, the one action being inconsistent with the other. The electric fluid therefore regulates the light and heat of the sun throughout the whole world, and is itself regulated by them; so that neither heat nor cold can ultimately predominate any where."

Sec 2

SECT. IV. *Of the NATURE of ELECTRICS and CONDUCTORS.*

(119.) The remarkable difference between electrics and conductors naturally leads an electrician to inquire into the cause of the phenomenon, upon what principle, or by what mechanism it is, that some bodies are capable of transmitting the electric fluid, while other substances are quite impervious to it?

(120.) To explain the reason of these remarkable properties, various conjectures have been offered, but the subject still remains among the *arcanæ* of the science. When the list of electrics and conductors was extremely limited, it was imagined, that metals and water were the only conducting principles; and that all other substances were more or less perfect conductors, in proportion to the quantity of moisture or metallic particles they contained. Wood, for instance, was supposed to be a conductor only from the moisture it contained; and this was confirmed by observing, that in proportion as it became dry, it acted more like an electric. But when charcoal and hot air, which contain neither metals nor water, were observed to be good conductors, especially the former, and when water itself was found to be a bad conductor, the hypothesis fell to the ground.

(121.) The only plausible hypothesis was offered by Dr Priestley, in the 2d vol. of his *Observations on the different kinds of Air*: and it is thought to be well founded by Mr Cavallo and other eminent electricians. Dr Priestley, after considering the principle, which conductors seem generally to be possessed of, ascribes the conducting quality solely to phlogiston. "Had there been (says he) phlogiston in water, I should have concluded, that there had been no conducting power in nature but in consequence of some union of this principle with some base. In this metals and charcoal exactly agree—While they have the phlogiston they conduct; when deprived of it, they will not conduct."

(122.) Dr PRIESTLEY adds in a note:—"Having since found, that long agitation in the purest water injures air, so that a candle will not burn in it afterwards, which is precisely the effect of phlogistic processes, I now conclude, that the axiom, suggested in this paragraph, is universally true."

(123.) "This hypothesis, says Mr Cavallo, seems ingenious and probable;" but notwithstanding the respectable authorities of Dr Priestley and Mr Cavallo, a cautious electrician will be apt to doubt the truth of a theory, which is founded upon the supposition of a fluid, the existence of which has been long questioned, and is now clearly disproved by the latest discoveries in chemistry. CHEMISTRY, *Index*. The objection, which Mr Cavallo himself judiciously urges against the identity of the electric and the ethereal fluids, (See § 171.) is no less strong against Dr Priestley's hypothesis; ether and phlogiston being equally hypothetical fluids, of whose existence there is no evidence whatever.

(124.) And as for Dr Priestley's inference from the long agitation of air in pure water, it cannot

be esteemed any evidence of the existence of phlogiston, while the fact can be otherwise accounted for, upon more simple and obvious principles. The cause, why a candle will not burn in air thus long agitated, a man of plain understanding would ascribe solely to the humid effluvia, or dampness acquired by the air, during such agitation.

(125.) Mr TYTLER seems to account for the difference between electrics and conductors, at least more plausibly, if not more philosophically than the Doctor, by ascribing the cause solely to the different capability of these two classes of bodies to admit, or transmit, the different kinds of motions of the electric fluid. "Glas, and other electric substances (he says) are so constituted, that they can transmit the *vibratory motions* of the electric matter, though they cannot admit of any considerable *progressive* one. Conducting substances, on the other hand, admit of a *progressive motion*, but not so easily of a *vibratory* one." In these vibratory motions of the electric fluid, he elsewhere observes, positive electricity consists. See § 258, 260.

SECT. V. *Of the RESIDENCE and MOTION of the ELECTRIC FLUID, and the PERMEABILITY of ELECTRICS.*

(126.) There has been no small difference of opinion among electricians concerning the place occupied by the electric fluid in bodies, as well as concerning its motion, through or along their surfaces.

(127.) "That the electric fluid (says Mr Cavallo) proper to a body, when in its natural state, is equally diffused throughout all its substance, I think no one will deny; because that fluid is attractive of the particles of all other matter, and the particles of other matter are attractive of the electric fluid: and as this attraction is in proportion to the quantity of homogeneous matter, any quantity of matter will certainly attract a quantity of electric fluid proportionate to itself; therefore the electric fluid must be equally diffused throughout all the parts of that portion of matter. This proposition, however, (he adds) will take place only in speaking of conductors; for it is founded upon the supposition, that the electric fluid, proper to a body in its natural state, does freely pervade that substance; but whether this is a fact respecting electrics, or not, hath not hitherto been ascertained. As far as may be judged from experiments, I should suppose this rule to hold good with electrics also."

(128.) Mr Tytler, on the other hand, lays it down as a principle, that "the electric fluid *moves through* the substance of *electrics*, though with difficulty;" but that "in most cases it *passes along* the substance of good *conductors*." The following is the substance of his reasoning in support of these positions:

(129.) "The electric most universally present (says he) is *air*. That the electric fluid pervades its substance is evident to our eye-sight; for if a pointed body is placed on the prime conductor, and at the same time the cylinder is briskly turned, a continual stream of blue fire will be observed to issue from the point. This is undoubtedly the fluid itself made visible by the resistance it

meets from the air. That the electric fluid in this case pervades the air to a considerable distance, is also evident from the different methods by which the air of a room may be electrified. One method is that above mentioned: One or more needles are fixed on the prime conductor, which is kept strongly electrified for about 10 minutes. If, afterwards, an electrometer is brought into the room, the air will show that it has received a considerable quantity of electricity; for the balls will separate, and continue to do so even after the apparatus has been quite removed out of the room.

(230.) 'Another method of electrifying the air is to charge a large jar and insulate it; then connect a sharp-pointed wire, or a number of them, with the knob of the jar; and make a communication from the outside coating to the table. If the jar is charged positively, the air of the room will likewise soon become electrified positively; but if the jar is charged negatively, the air will also become negative. To this it may be replied, that the air is always full of conducting substances, and that by means of them the electricity is propagated from one part of the air to another. But whether this is the case or not, it is certain that the air, notwithstanding all the conducting substances it may contain, is in fact an electric, and capable of receiving a charge like glass or any other electric substance.

(231.) 'This may be proved by the following experiment: Take two smooth boards, of a circular form, and each about three or four feet in diameter. Coat one side of each with tin foil, which should be pasted down and burnished, and turned over the edge of the board. These boards must be both insulated, parallel to one another, in a horizontal position. They must be turned with their coated sides towards each other; and should be placed in such a manner as to be easily moved to or from each other; to do which, it will be proper to fix to one of the boards a strong supporter of glass or baked wood, and to suspend the other by silk strings from the ceiling of the room; from which it may be lowered at pleasure by means of a pulley. When these boards are placed in the manner above described, and about an inch distant from one another, they may be used exactly as the coatings of a pane of glass. If a spark is given from the conductor to the upper board, a spark will instantly be discharged from the lower one, if any conducting substance is presented to it. By continuing to give sparks to the upper board, and to take them from the lower one, the air between them will at last become charged like a piece of glass; and if a communication is made between them, they will explode, give the shock, &c. like glass.

(232.) 'In this experiment it is evident, that the air is penetrated by electric fluid. The distance of an inch is so small, that it would be ridiculous to suppose that this space is penetrated only by a *very pulsive power*, when in other cases we plainly see the fluid penetrating it to 3 or 4 times that distance. The flat surface of the boards indeed makes the motion of the electric fluid through the plate of air gradual and equal, so that it is not seen to pass in sparks or otherwise; but this is necessary to its receiving a charge.

(233.) 'If one electric substance is penetrable by the electric fluid, we must be led to suspect at least, that all the rest are so too. That rosin, pitch, sealing wax, &c. are so, hath been proved; and from thence, if we reason analogically, we must conclude, that glass is likewise penetrable by it. A very strong additional proof of this is, that the electric shock cannot be sent over the surface of glass. If this substance was altogether impenetrable to the fluid, it would run over the surface of glass very easily. But instead of this, so great is its propensity to enter, that a shock sent through between two glass plates, if they are pressed pretty close together, always breaks them to pieces and even reduces part of them to a powder in sand. This last effect cannot be attributed to any other cause than the electric fluid entering the pores of the glass; and, meeting with resistance the impetus of its progressive motion violently forces the vitreous particles asunder in all directions.

(234.) 'To this violent impetus of the electric fluid, when once it is set in motion, we may add with some probability ascribe the bursting of electric globes, both such as are made of glass, and other materials, in the act of excitation. Dr Priestley hath given several instances of this accident. "The fragments (says he) have been thrown with great violence in every direction, so as to be very dangerous to the bystanders. This accident happened to Mr Sabbatelli in Italy, Mr Nollet in France, Mr Beraud at Lyons, Mr Boze at Viterberg, Mr Le Cat at Rouen, and Mr Rollet at Rennes. The air in the inside of Mr Sabbatelli's globe had no communication with the external air, but that of the Abbe Nollet had. The last, which was of English flint glass, had been used for more than two years, and was above line thick. It burst like a bomb in the hands of a servant who was rubbing it, and the fragments none of which were above an inch in diameter were thrown to a considerable distance. The Abbe says, that all the globes which were broken in that manner, exploded after 5 or 6 turns of wheel; and he ascribes this effect to the action of the electric matter making the particles of glass vibrate in a manner he could not conceive.

(235.) 'When Mr Beraud's globe burst (as he was the first to whom this accident was known to happen), he was making some experiments in the dark on the 8th of Feb. 1750. noise was first heard as of something rending pieces; then followed the explosion; and when the lights were brought in, it was observed that those places of the floor, which were opposite the equatorial diameter of the globe, were strewn with smaller pieces, and in greater number than those which were opposite to other parts of it. This globe had been cracked, but it had been in constant use in that state above a year; and the crack had extended itself from the pole quite to the equator. The proprietor ascribed the accident to the vibrations of the glass, and thought the crack had some way impeded these vibrations. When Mr Boze's globe broke, he says that the whole of it appeared, in the act of breaking, like a flaming coal. Mr Boulanger says, that glass globes have sometimes burst like bombs, and have wounded

wounded many persons, and that their fragments have even penetrated several inches into a wall. He also says, that if globes burst in whirling by the gun-barrel's touching them, they burst with the same violence, the splinters often entering into the wall. The Abbe Nollet had a globe of sulphur which burst as he was rubbing it with his naked hands, after 2 or 3 turns of the wheel, hanging first cracked inwardly. It broke into very small pieces, which flew to a great distance, and into a fine dust; of which part flew against his naked breast, where it entered the skin so deep, that it could not be got off without the edge of a knife.

(236.) 'From these appearances we must conclude, not only that the electric fluid moves within the substance of electric bodies, but that it sometimes moves with extreme violence; so that its repulsive power separates even the minutest particles from each other; and this could not happen without a thorough penetration of the electric body. It seems more difficult to prove, that the electric matter does not generally pass directly through the substance of metals, but over their surface. A little consideration, however, will show, that this must very probably be the case. If we compare Dr Priestley's experiments on metals, with the effects of the solar light collected in the focus of a burning glass upon the same metals, we shall find a considerable degree of resemblance. Under the article BURNING GLASS, § 25. it is observed, that, notwithstanding the prodigious power of the concave mirror with which Mr Macbride melted platina, all bodies did not melt equally soon in the focus. In particular, polished silver, though a very fusible metal, did not melt at all. It is not to be doubted, that this was owing to the complete reflection of the light by the silver; and had polished pieces of all the metals been tried, it is equally certain, that the difficulty of melting them would have been found exactly proportioned to their reflective power. Something of this happened with Dr Priestley; for silver was less touched by the electric explosion than any other metal. The violent progressive motion of the fluid indeed forced it into the metal, but at the same time the reflective power of the silver hindered it from going so deep as it had done in the others. The case was still more evident when heated lead and quicksilver were used. These have a very great reflective power; and though by reason of the extreme violence wherewith the fluid struck them, part of their substance might naturally have been supposed to be dissipated in the hard metals, yet we find this was not the case. Only a black spot was made on the surface, and the fluid was immediately dispersed, most probably over the surface of the metal.

(237.) 'It is not indeed easy to bring a decisive proof in favour of this hypothesis. The extreme insubility, and, in most cases, invisibility, of the electric fluid, render all reasoning about its motions precarious. It is incredible, however, that this fluid should pass through the very substance of metallic bodies, and not be in the least retarded by their solid particles. In those cases, where the solid parts of metals are evidently penetrated, as when wires are exploded, there is a very ma-

nifest resistance; for the parts of the wire are scattered about with violence in all directions. The like happened in Dr Priestley's circles made on smooth pieces of metal. Part of the metal was also dispersed and thrown off, for the circular spots were composed of little cavities. If therefore the fluid was dispersed throughout the substance, and not over the surface of the metal, it is plain, that a wire whose diameter was equal to one of those circular spots, ought also to have been destroyed by an explosion of equal strength sent through it. But this would not have been the case. A wire whose diameter is equal to one of those circular spots represented in Plate CXXV. fig. 2, 3, 4. would without injury conduct a shock much greater than any battery hitherto constructed could give. It is most probable therefore, that though violent flashes of electricity, which act also as fire, will enter into the substance of metals and consume them; yet it immediately disperses itself over their surface, without entering the substance any more, till being forced to collect itself into a narrow compass it again acts as fire.

(238.) 'In many cases, the electric fluid will be conducted very well by metals reduced to a mere surface, so that we can scarce say they have any thickness at all. A piece of white paper will not conduct a shock without being torn in pieces, as it is an electric substance. But a line drawn upon it with a black lead pencil will safely convey the charge of several jars. It is impossible to believe that the fire here passes through the substance of the black lead stroke. It must run over its surface; and if we consider some of the properties of metals, we shall find, that there is very great reason for believing that their conducting power lies at their surface.

(239.) 'The metals of all terrestrial substances, reflect the light most powerfully. Sir Isaac Newton hath shown, that this reflective power they have not from their substance as metals, but from what he calls a *repulsive power*, spread equally over their surface. The existence of this repulsive power hath already been taken notice of in several instances, particularly in that of a chain, whose links cannot be brought into contact with each other without a considerable degree of force. It is exceedingly probable, that the repulsive power by which the links of the chain are kept asunder, and that by which the rays of light are reflected, are one and the same. As the electric fluid is known to pervade all substances, and metals as well as others, it seems also probable, that the repulsive and reflective power on the substance of metals is no other than the electric fluid itself in a quiescent state. Perhaps it may be thought absurd to ascribe the reflection of light to a substance of such extreme fluidity and tenuity as the electric fluid is; but we find that the vacuum of an air-pump, a medium of nearly equal tenuity with the electric fluid, is in some cases capable of reflecting light very powerfully. Now it is certain, that nothing can be supposed to give such an easy passage to the electric fluid as itself; because it is the thinnest and most subtle of all the substances we know, and therefore must make the least resistance. Hence the fluid slides over the surface of a piece of metal, with surprising ease; and when

a large surface of metal is electrified, the effect is proportionable to the extent of it, because all that quantity of electric fluid which is spread over the surface, easily receives the motion communicated by the electrical machine.

(240.) 'The VACUUM of an air-pump is found to be a very good conductor, and by means of it the motion of the fluid is rendered visible. Hence this is brought as an argument that the electric fluid *always* passes through the substance of conductors. That it doth so in some cases is indeed very evident, but it then meets with considerable resistance; and, even in the present instance, the passing through the vacuum of an air-pump, where it is opposed by a considerable quantity of the same kind of fluid, gives such a considerable resistance, that it will prefer a passage along a metalline rod to one through a vacuum. With regard to charcoal, and other conductors of that kind, as they are very porous, and likewise composed of fine spiculæ, it is probable the fluid may run along the surface of the spiculæ, and at the same time through the substance of the coal. Even in passing over the best conductors, however, this fluid meets with some resistance, as it will prefer a short passage through the air to a long one through the best conductors.'

SECT. VI. Of the CAUSE of the EXTRAORDINARY VELOCITY and STRENGTH of the ELECTRIC FLUID.

(241.) Mr TYTLER assumes it as a principle that "the exceeding great velocity and strength of the electric fluid, are not owing to a repulsive power among its particles, but to the mutual action of the air and electric fluid upon themselves and one another. In support of this position he reasons as follows:—

(242.) 'The arguments for a repulsive power existing between the particles of the electric fluid are very inconclusive. The strongest is that drawn from the appearance of the electric fire issuing from a point, or from any body highly electrified. In the open air this diverges exceedingly; and very often divides into several distinct rays, which by avoiding each other seem to be violently repulsive. That they are not so in reality, however, is plain from the appearance they have *in vacuo*; where the resistance of the atmosphere being taken off, the electric light has room to spread more widely. Fig. 5. Plate CXXV. represents an exhausted receiver with an electrified wire discharging a stream of this fluid from itself, by means of its communication with a machine. If the electric matter then was really elastic, or endowed with a power repulsive of itself, it is impossible it could pass in an uninterrupted column through an exhausted receiver as in the figure. A column of air, if blown swiftly through the orifice of a small pipe, will go forward a considerable way, if it is counterbalanced by air like itself on every side. But if such a column enters a vacuum, its *elasticity* occasions it to be dissipated in a moment, and equally diffused through the whole exhausted receiver. But this by no means happens to the electric fluid; for even the small divergency represented in the figure seems entirely owing to some quantity of air left in the air pump. Dr WAT-

SON, by means of a long bent tube of glass filled with mercury, and inverted, made all the bent part which was above the mercury the most perfect vacuum that could be made. This vacuum he insulated; and one of the basons of mercury being made to communicate with the prime conductor, when some non-electric substance touched the other, the electric matter pervaded the vacuum in a continued arch of lambent flame, and, as far as the eye could follow it, without the least divergency. From these experiments it appears, that there is in the vacuum of an air pump, as well as in the Torricellian vacuum, a fluid of nearly the same density with the electric one: that the electric fluid is not repulsive of itself, but is resisted by the atmosphere; and therefore all appearances of electrical light are less bright *in vacuo* than in the open air; because, the more resistance the matter meets with, the brighter is the flash.

(243.) 'Thus, as long as a stream of electric fluid is moved through a medium of an equal density with itself, the equable pressure of the fluid all around will keep the luminous streams from diverging; but if the pressure is taken off from any part of the receiver, the pressure of the fluid will immediately force the stream to that place, as represented in fig. 6. Plate CXXV. That it is a pressure of this kind, and not by any obscure *attractive power*, that this is occasioned, will be rendered very probable from the following experiment. Suppose a pot is boiling violently over a fire, in such a situation that there is very little agitation in the surrounding air. The equal pressure of the atmosphere will then force the steam straight upwards in a cylindrical column; but, if any object is brought near the edge of the pot, so that the pressure of the atmosphere is taken off on one side, the steam will be directly forced upon that body, or seemingly *attracted* by it. The electric matter therefore, being capable of having its motions resisted by the air, must immediately fly to that place where the resistance is least; but in the case above mentioned, this is best done by applying a conducting substance to the side of the receiver, or one along which the fluid can run downward to the earth.

(244.) 'From this simple principle, viz. that fluids impelled by any force will always tend towards that place where there is least resistance, most of the phenomena of electricity may be explained. The first thing to be considered is, From what source it originally derives the astonishing agility and strength displayed in its motions. It is granted that the electric fluid is the same with the solar light, the ultimate cause of its momentum must be the power by which the light of the sun is emitted. As this power extends through regions of space which to our conceptions are truly *infinite*, so must the power itself be; and by its equable action all round, throughout the whole space through which the sun's light is propagated, the pressure of it upon all bodies must be equal all round, and consequently it can neither move them one way nor another. But if, by the intervention of some other power, the pressure is lessened upon any particular part, a current of electric matter will set towards that part, with a force

force exactly proportioned to the diminution of the pressure. Thus, in the common experiments of the air-pump, when the air is exhausted from a glass vessel, the pressure of the superincumbent atmosphere is directed towards every part of the glass; so that if it is of a flat square shape, and not very strong, it will be broken. But after the air is exhausted, the vessel is discovered to be full of another subtle fluid of the same nature with the electric one. (See VACUUM.) If this could be extracted from the vessel, the pressure on its sides would necessarily be much greater, because not only the atmosphere, but the whole surrounding ether or electric matter, would urge towards the place; and it is not probable, that this pressure could be resisted by any terrestrial power whatever.

(245.) 'The momentum of the electric matter therefore, in our experiments, depends on two facts, viz. the pressure of the atmosphere upon the electric matter, and the pressure of one part of this matter upon another. The celerity with which it moves may be explained from its parts being in contact with each other throughout the immensity of space. Hence the great tendency of the fluid to circulate; because, from whatever point a stream of it is sent off, there the pressure is lessened, and the stream, finding no place empty for its reception, must necessarily have a tendency to return to the place from whence it came, as there it meets with the least resistance, and hence, when a passage is opened, by which it can return to this point, it is pushed thither with great violence, the equable pressure is restored, and the artificial motion ceases.

SECT. VII. *Of the MANNER in which an ELECTRIC becomes EXCITED.*

(246.) 'The manner in which an electric substance becomes excited, or diffuses its electric virtue, will easily appear (says Mr Tytler,) from considering the means taken for the excitation of a common cylinder for electric experiments. To the surface of the glass is applied some amalgam spread on leather. This is a metallic substance which has an exceeding great reflective power, being that which is employed for silverizing looking-glasses. The electric fluid therefore runs over its surface with great ease, and there is always a certain quantity of this fluid in a state of stagnation on its surface. At the place where the cylinder touches the amalgam, the air is excluded, and consequently the electric fluid hath there a tendency to rise, more than at any other part of the surface where the atmosphere presses with its full force. When the cylinder begins to turn, it necessarily forces before it a small quantity of that electric matter which lay upon the surface of the amalgam.

(247.) 'To understand this the more easily, we must consider that property which glass has of transmitting the electric fluid through it, and refusing it a passage along its surface. Thus we may conceive it to be formed of a vast number of exceedingly small tubes placed close to each other. If we suppose any substance made by art of such a texture, we would find it impossible to pour water along its surface, though it would very easily

run through it. If such a substance was made in the shape of a cylinder, and turned briskly round, with its surface just touching a quantity of water contained in a vessel, the water would be scattered around in all directions. The case seems to be the same with the more subtle electric fluid. The glass cylinder throws out part of the electric fluid lying on the surface of the amalgam. This quantity is perpetually renewed from the conducting side of the rubber. The quantity which is thrown out cannot be conducted over the surface of the glass, nor can it pass through it; because it is resisted by the air in the inside, and, in some measure, by the glass itself. It is also resisted by the air on the outside; but as that resistance is less than what is made by the air and glass both, the fluid naturally forces itself into the open air. Still, however, there neither is, nor can be, any accumulation of the matter itself. It cannot enter the air without displacing the electric matter which was there before. This will displace more of the same kind, and so on, till at last the motion is communicated to the electric matter lodged in some part of the earth. From thence it is propagated to the rubber of the electric machine, and thus a kind of circulatory motion is carried on. By the excitation of an electric substance, therefore, the fluid is not accumulated, but only set in motion. The reason of that seeming accumulation observable about the excited cylinder is, the resistance which the fluid meets with from the air. This instantly produces a divergency in the stream of electric matter, and a vibratory struggle betwixt it and the air; which again produces the appearances of fire and light, for the reasons already given.

(248.) 'That this kind of vibratory motion or struggle between the electric fluid and air always takes place when the latter is set in motion, seems evident from the sensation which is felt when a strongly excited electric is brought near any part of the human body. This is such as would be occasioned by a spider's web drawn lightly along the skin, or rather by a multitude of small insects crawling upon the body. It is proved by an experiment made by Dr PRIESTLEY, who upon exposing a dish of water, strongly electrified, to the open air in a severe frost, observed on each side of the electrified wire the same dancing vapour which is seen near the surface of the earth in a hot day, or at any time near a body strongly heated.

(249.) 'If the glass cylinder is exhausted of air, the electric matter, instead of flying off into the air, runs directly through the glass; and, meeting with some resistance from the vacuum as it is called, a weak light is produced in the inside, but no signs of electricity are perceived on the outside of the glass. The same thing happens by giving the cylinder or tube a metallic coating. The fluid collected from the rubber runs directly through the glass, and along the surface of the metallic coating, which keeps off the pressure of the air contained in the glass. If an electric lining is used, and the glass is exhausted of air, the motion of the fluid becomes visible through both, and the whole is transparent. If the cylinder is lined with an electric substance, and the air is not exhausted, the electricity on the outside is often considerably

siderably increased; but the reason of this is not evident. Most probably it is owing to the different kind of electricity acquired by the inside lining; for electricity of any kind always produces its opposite at a small distance, the reason of which shall be afterwards given.

(230.) 'If the air within the cylinder is condensed, the electrical appearances on the outside are lessened in proportion. The reason of this seems to be, that though it is necessary that the fluid should not go through the substance of the glass very easily, yet it is requisite that its passage should not be totally obstructed; and therefore the electric experiments succeed best when the air within the glass is a little rarefied. We must also consider, that when an additional quantity of air is forced into the cylinder, an equal bulk of electric matter is forced out. The rest of the matter, therefore, which is contained all round the glass, presses violently into its pores; but this pressure, being directly opposite to what happens when the glass is excited, must of consequence hinder the excitation. If the glass is now made very hot, the pressure of the atmosphere is kept off, and the passage of the electric fluid through the glass and condensed air is rendered easier, and therefore the electric appearances on the outside return.

(231.) 'On the same principles may we explain the excitation of a solid stick of glass, sealing wax, or sulphur. Though these have no air within them, yet they have a very considerable quantity of electric matter, which resists an expulsion from its place: and therefore, though it may yield a little when the rubber is applied to the outside, yet it will instantly throw off into the atmosphere what the rubber has left on the surface; because the resistance is least towards that place, as soon as the electric has come out from under the rubber. Hence also we see the reason why no signs of electricity are observed on glass to which the rubber is immediately applied; namely, because the pressure being equally great all round, no part of the electric fluid can be thrown off into the atmosphere, in order to set the rest in motion.

(232.) 'The only thing necessary to be added in confirmation of this theory of excitation is, that electric substances of the same kind cannot be excited by rubbing them against one another. Thus glass cannot be excited by rubbing it against glass, &c.'

SECT. VIII. *Of the ACCUMULATION and METAMORPHOSES of POSITIVE and NEGATIVE ELECTRICITY.*

(233.) 'From what hath been already advanced, (says Mr Tytler,) it will pretty plainly appear, that to increase the quantity of electric fluid in any body is a thing impossible, unless we also augment the size of the body. All the fine pores of every terrestrial fluid are exceedingly full, and unless we separate the minutest particles of the body farther from one another than they are naturally, we cannot introduce more of the electric fluid into it than there was before. This fluid, we have already seen, is not, like the air, endued with a repulsive force between its particles: and therefore it must be incompressible. If it is incompressible, all the phenomena attending it must be owing to

its various motions, and the seeming accumulations of it must be owing only to its more br action in some places than in others. But before a complete solution of the phenomena of positive and negative electricity can be given, it is necessary to show that these are not so essentially distinct and opposite as they have been thought to be, but may be converted into each other in such cases as we cannot possibly suppose either addition or subtraction of the electric fluid.

(234.) 'This position, however opposite to the common opinions on the subject, may be proved by the following experiments. 1. Let a coated phial be set upon an insulating stand and let its knob be touched by the knob of another phial negatively electrified. A small spark will be observed between them, and both of the insulated phial will instantly be electrified negatively. Now, though we may suppose the one side of the phial which is touched by the negatively electrified one to lose part of its fluid, yet this cannot be the case with the other, because there is nothing to take it away, and therefore it ought to appear in its natural state. 2. Let a phial, having a pith ball electrometer fastened to its outside coating, be slightly charged positively, and then set upon an insulating stand. The outside is then negatively electrified, or, according to Dr Franklin's theory, has too little electric matter in it. The pith balls, however, will touch each other, or separate but in a very small degree: let the knob of another bottle, which hath received a strong charge of positive electricity, be brought near to the knob of the first, and the pith balls on the outside will diverge with positive electricity. Now, it is impossible that any substance can have both *too much* and *too little* electric matter at the same instant: yet we see that negative electricity may thus instantaneously be converted into the positive kind, in circumstances where the addition of fire to the outside can be supposed. 3. Let the same phial, with the pith-balls attached to its outside coating, be slightly charged negatively, and then insulated. The outside is now electrified positively, or, according to Dr Franklin's hypothesis, has too great a quantity of electric fluid. Nevertheless, upon bringing the knob of another phial strongly electrified negatively to that of the insulated one, the pith-balls will instantly diverge with negative electricity. 4. Let a phial receive as full a charge of positive electricity as it can contain, and then insulate it. Charge another bottle highly with negative electricity. Bring the knob of the negative bottle near that of the positive one, and a thread will play briskly between them. When the knobs touch each other, the thread, after being attracted, will be repelled by both. The negative electricity is somehow or other superinduced upon the positive; and, for a few moments after the bottles are separated, both will seem to be electrified negatively. But if the finger be brought near the knob of that bottle on which the negative electricity was superinduced, it will instantly be dissipated, a small spark strikes the finger, and the bottle appears positively charged before.

(235.) 'From these metamorphoses of positive into negative, or negative into positive, electricity

is proved in the most decisive manner, that electric fluidity doth not consist in an accumulation, nor the negative kind in a deficiency, of the electric fluid. We are obliged, therefore, to attribute the only probable supposition, namely, that of them arise entirely from the different directions into which the fluid is thrown in different circumstances; and of consequence, the only method of giving an intelligible explanation of positive and negative electricity is by considering the several directions of the fluid in each.

(255.) 'A great variety of methods have been used to ascertain the direction of the electric fluid, but all of them seem uncertain, except that it is drawn from the appearance of electric light. The luminous matter appearing on a point positively electrified is very small, resembling a spark; it makes little noise, and has a kind of rattling sound. The positive electricity, on the other hand, appears in a diverging luminous stream, which darts a considerable way into the air, with a cracking noise. Now, it is certain, that in every case the electric fluid darts from the point into the air, in that case it must be the most distant by it; and this is evident in the positive electricity. In this, the rays evidently diverge from the points. We may, indeed, suppose them converging from many points in the surrounding air towards the metallic point. But why do we imagine that a visible ray would break from one place of the atmosphere more than another? The air, we know, resists the motion of electric fluid, and it certainly must resist it equally. Of consequence, when this fluid is coming from the air towards a pointed conductor, it must move slowly and invisibly through the air on all sides equally, till it comes so near that it is able to break through the intermediate space; and as this will likewise be equal, or nearly so, all round, the positive electricity must appear like a steady luminous globe on the point, not lengthening out or breaking by flashes as the positive kind does. Philosophers have therefore determined with a great deal of reason, that when a point is electrified positively the matter flows out from it.

(256.) 'It is to be remarked, however, that in every case, if not in all, a body cannot be electrified negatively till it has first become positively electrified; and it is in the act of discharging its positive electricity that it becomes negative. Thus, if a coated phial be set upon an insulated stand, and its knob is approached by that of another bottle charged positively: a small spark is observed between them, and both sides of the insulated bottle are electrified positively; but as soon as the finger is brought near to the outside, the positive electricity is discharged by a spark, and a negative one appears. But from what hath been already advanced, it is evident, that positive electricity is when the fluid hath a tendency to leave the body, and the negative electricity when it has the same tendency to enter it. Therefore, the electric fluid is subject to mechanical laws as well as other fluids, it must follow, that these tendencies are produced and kept up by the motions excited originally in the air, and electric fluid in the air, surrounding these bodies. If this principle is kept in view, it will lead us to an easy

explanation of many electrical phenomena, for which no satisfactory reason hath hitherto been given.

SECT. IX. Of the PHENOMENA of ELECTRIC ATTRACTION and REPULSION.

(258.) 'It hath now been shown, that, in bodies electrified positively, there is a flux of electric matter from their surface all round; that is, the fluid contained in their pores pushes out on every side, and communicates a similar motion to the electric fluid contained in the adjacent atmosphere. This must of necessity very soon exhaust the body of its electric matter altogether, if it was not instantaneously supplied after every emission. But this supply is immediately procured from the surrounding atmosphere. The quantity sent off is instantly returned from the air, and the vibratory motion or struggle between the air and electric fluid, which hath been often mentioned, immediately takes place. The positive electricity therefore consists in a vibratory motion in the air and electric fluid; and the force of this vibration is directed outwards from the electrified body. In bodies negatively electrified, the fluid contained in the neighbouring atmosphere is directed inwards towards the body so electrified. But it is certain, that this motion inwards cannot be continued unless there is also a motion of the fluid outwards from the body. In this case also there is a vibratory motion, but the force of it is directed inwards, and as the source of it lies not in the body, but in the surrounding atmosphere, it manifests itself somewhat less vigorously.

(259.) 'The reason why these motions are continued for such a length of time as we see they are, is, the extreme mobility of the electric fluid. It doth not indeed appear from any experiments, that this fluid hath the least friction among its parts. A motion once induced into it must therefore continue for ever, until it is counteracted by some other motion of the same fluid. Hence, when a vibratory motion is once introduced among the particles of the electric fluid contained in any substance, that motion will be kept up by the surrounding fluid, let the body be removed to what place we please. There is no occasion indeed for supposing any thing like an electric atmosphere round the electrified body. The case is exactly the same as with a burning body. Let a candle be carried to what place we will, it will still burn; but it would be absurd to say, that the fire surrounded it like an atmosphere, as we know the fire is kept up by the air only, which is changed every moment. In like manner, the positive and negative electricities, which are two different motions of the electric fluid, are kept up by the air and electric matter contained in it; and, wherever the electrified body is carried, these fluids are equally capable of continuing them.

(260.) 'The phenomena of attraction and repulsion are now easily explained. Let us suppose a body positively electrified suspended by a small thread, at a distance from any other. The vibration above-mentioned, in which positive electricity consists, being kept up by the equable pressure on all sides, the body is neither moved to one side nor another. But when a negatively electrified body

body is brought near, the force of the vibration being directed outwards in the one, and inwards in the other, the pressure of the fluid in the intermediate space between them is greatly lessened; and of consequence the pressure on the other sides drives them together, and they are said to *attract* each other. If another body, electrified also positively, is brought near to the first, the force of the vibrations are directly opposed to one another, and therefore the bodies recede from each other, and are said to *repel* one another. The case is the same with two bodies negatively electrified: for there the electricity, as far as it extends round the bodies, consists of a vibratory motion of the electric fluid; and the vibrations being directed towards both the bodies, as towards two different centres, must necessarily cause them recede from each other; because, if they remained in contact, the vibratory motions would interfere with and destroy one another.

(261.) 'When a small body is brought within the sphere of another's electricity, the equable pressure of that vibratory or electrical sphere is somewhat lessened upon the side near which the second body is brought; and therefore it is immediately impelled towards the first by the action of the surrounding fluid, in order to keep up the equilibrium. As soon as it arrives there, the vibrations of the fluid around the first body being communicated to that within the pores of the second, it immediately acquires a sphere of electricity as well as the first, and is consequently repelled. The repulsion continues till the vibration ceases either by the action of the air, or by the body coming in contact with another much larger than itself; in which case the electricity is said to be *discharged*. If, after this discharge of electricity, the second body is still within the electric sphere of the first, it will immediately be attracted, and very soon after repelled, and so on alternately till the electricity of the former totally ceases.'

SECT. X. Of the DIFFERENCE of the DISCHARGE by SHARP and BLUNT CONDUCTORS.

(262.) The manner in which the discharge of electricity is accomplished by *sparks* upon blunt conductors, and *silently* by pointed ones, 'will best appear (says Mr Tytler) from considering the nature of what is commonly called *electricity*. This cannot appear but in an electric substance; and the substance in which it doth appear is the air. The prime conductor of an electrical machine discovers no other properties in itself, when electrified, than it had before. The metal is equally hard, shining, and impenetrable. The electricity, or properties of attracting, repelling, &c. are all lodged in the air; and if the conductor is placed *in vacuo*, they instantly cease. It hath already been shown, that the electric matter runs over the surface of conducting substances in great quantities, like a stream of water running from one place to another. In this manner it will not pass over the surface of electrics. It enters their substance, and passes through it with a vibratory motion. This vibratory motion always shows a resistance; nor is it in any case possible to induce a vibration without first impressing a motion in one direction, and then resisting it by a contrary

motion. Round the surface of an electrified body suspended in the air, therefore, there is always an equable pressure, by which the emission of the electric fluid is every moment checked, and which its vibrations are occasioned. When a metallic substance is brought near the electrified body, the fluid has an opportunity of making its escape provided it could get at the metal, because it can run along its surface. The pressure of the air is also lessened on that side which the conducting substance approaches. The whole effort of electric matter contained in the vibratory motion is exerted against that single place, because resistance is least.

(263.) 'If the body has a broad surface, how the disproportion between these resistances is so great as when its surface is less. Let us suppose that the surface of the conducting substance contains an inch square, and the whole surface of the electrified sphere contains only six square inches. When the conducting substance approaches the pressure is directed to that place; and therefore made by the electric matter to escape there is five times as great as it is any where else. Nevertheless, though it has a vibratory motion in the substance of the air, it cannot have a progressive motion through it without violently displacing parts; and an inch square of air makes a considerable resistance. At last, however, if the resistance is every moment made less by approaching the conducting substance to the electrified body, the electric matter breaks through the thinness of air, strikes the conductor, and runs along it. The spark is produced by the resistance it meets with from the air.

(264.) 'But if, instead of a body with a large surface, we present the point of a needle, whose surface is perhaps not above the ten-thousandth part of a square inch, the efforts of the electric matter to discharge itself there will be 60,000 times greater than any other place, because the whole surface of the six square inches, of which we suppose the surface of the electric sphere to consist, is exerted against that single point. The air also resists in the former case; but it can resist only in proportion to the extent of its surface which the conducting body; and this, being only the ten thousandth part of a square inch, must be exceedingly little. As soon, therefore, as a needle or any other fine pointed body, is presented to the electrified substance, the electric matter is driven thither with great velocity; and as it hath an opportunity of running along the needle, its vibrations quickly cease, and the electricity is *drawn off*.

(265.) 'This drawing off, however, does not tend all round the electrified body, if means are used to keep up the electricity perpetually. If, on the end of the prime conductor, the threads of a number of fine threads, hairs, &c. are fastened, and the cylinder is turned, the threads on the end diverge, and spread out like as many rays proceeding from a centre. If a point is presented to one side of the conductor, though at a considerable distance, the threads on one side will lose their divergency and hang down, but those on the other side will continue to diverge. The reason of this is, the difficulty with which the electric

gets through the atmosphere, even where the resistance of it is made as little as possible; and hence also we may see why more conductors than one may be necessary for the safety of large buildings. See SECT. VIII, and LIGHTNING.

SECT. XI. *Of the TENDENCY of EACH KIND of ELECTRICITY to produce the OPPOSITE KIND.*

(266.) No phenomenon in electricity seems to be more difficult to solve, than the question, *Why, positive electricity induces the negative kind in any body within its sphere of action, and why the negative kind produces the positive in similar circumstances?* Mr Tytler pronounces it "totally insupportable, unless we give up the idea of accumulation and deficiency of the electric fluid in different bodies. On Dr Franklin's principles, no solution hath been attempted. Mr Cavallo places this among the *properties* of electricity for which he doth not pretend to account, but gives as the *causes* of the phenomena.

(267.) "It is indeed certain, that if a body hath *too much electricity* or any thing else, it cannot be continually taking from those around it; and if it hath *too little*, it cannot be continually giving them. By attending to the principles above laid down, however, this phenomenon admits of ready solution. As positive electricity consists in vibratory motion of the electric matter in the *interior* of any body, and to some distance through the *air*, while at the same time the force is directed *outwards* from the body, it is plain, that if any other body is brought within this sphere, the direction of the vibration is changed; for what is *outwards* from the one is *inwards* to the other. In a vibratory motion, the force of which is directed *inwards*, is what constitutes negative electricity; and, therefore, no sooner is any body placed at some distance from one positively electrified, than it immediately becomes negatively so.

(268.) "The same reason may be given why negative electricity produces the positive kind on a body placed near it. In the negative kind, the force of the vibration is directed *inwards*. If another body is brought near, the vibration which *inwards* to the first must be *outwards* from the second, which thus becomes positively electrified. The only difficulty here, is to account for this motion, (which is only inward or outward to one side of the body brought near the electrified one,) as to suddenly propagated all round. This, however, must easily be seen to arise from the extreme subtilty of the electric fluid, and its effort to keep up an equilibrium in all parts, which it will never suffer to be broken. When this fluid rushes inward to one side of the body, the fluid contained in that body would immediately yield, and allow a free passage to what came after, if its yielding was not obstructed by something on the other side. This obstruction arises from the air, which cannot admit a progressive motion of electric matter through it. No sooner, therefore, is a push made against one side than a contrary one is made against the other; and thus the body immediately becomes electrified all round.

(269.) "On these principles, also, may we account for the ZONES of positive and negative elec-

tricity which are to be found on the surface of glass tubes; and especially in electrified air. When the prime conductor of a machine is strongly electrified positively, it is throwing out the fluid from it in all directions. The air cannot receive this fluid without throwing out that which it also contains; and this shows, that simple electrification can neither increase nor diminish the density of the air, which is also vouched by numberless experiments. But if the air throws out its electric fluid in all directions, it must throw some of it back upon the conductor, and consequently obstruct its operations. This likewise is found to be the case; for it is impossible to make an electric machine act long with the same degree of strength, owing to the electricity communicated from it to the air. But if the conductor and air are thus reciprocally throwing the electric matter back upon one another, it is impossible but another zone of air which lies at a greater distance must be continually receiving it, or be electrified negatively. But this cannot receive, without also emitting the fluid it contains; which, therefore, will be thrown upon another zone behind it, and partly back upon the first. The original force of the fluid being now spread over a large space, will consequently be diminished; and the succeeding zone will be electrified weakly, though positively. In like manner, a succeeding zone must yield, and receive the fluid from this; which will consequently be electrified negatively, though weaker than the former; and thus zones of positive and negative electricity will gradually succeed each other in the air, till no traces of either are to be found.

(270.) "In these zones, it must be remembered, that there is a centre peculiar to each, and from this centre the vibrations proceed either inward or outward. Thus, when the machine is first set in motion, a vibration is propagated from it as from a centre to some distance in the air, and the air is at first negatively electrified. But as this vibratory motion cannot be extended far in one direction, vibrations begin to be propagated in all directions from another centre at some distance. The conductor becomes then less positively electrified than before; however, by means of the machine, its electricity is still kept up, though weaker; but a zone of air beyond the first, where the resistance is much less, becomes negatively electrified. This again cannot continue long till vibrations outwards arise from another centre, and so on. It is scarce needful to add here, that the longer the electrification is continued, and the stronger it is, the broader these zones must be.

SECT. XII. *Of the PHENOMENA of the LEYDEN PHIAL.*

(271.) Upon the above principles, the phenomena of the Leyden phial are easily explained. See § 225. Mr Tytler observes, that "when the electric fluid is procured from the earth by an electric machine, if the conductor had a communication with the earth, all the matter collected by the cylinder would run along the conductor into the earth, and not a spark or other appearance of electricity would be procured in the air. But when the conductor is insulated, the matter is

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forced

forced to go off into the air, and there produces the vibratory motions already mentioned. If a pane of glass which has no metallic coating touches the conductor, though it is permeable by the vibratory motion of the fluid, yet a considerable resistance is made, and the fluid cannot easily diffuse itself over its surface. Nevertheless, it will soon show signs of having received electricity, that is, of having the fluid within its pores thrown into a vibratory motion. This motion is directed outwards, from the middle of the substance of the glass, to the surface, and a considerable way beyond it on both sides. Both sides of the glass are then positively electrified. If a conducting substance touches one of the sides of the glass, the vibrations on that side are destroyed; because the fluid which occasioned them yields to the resistance it met with, and runs along the conductor into the earth. But no sooner is this done, than the power which resisted the vibration outward from the glass having got the better in the manner just now explained, a new vibration is produced by that resisting power; and the force of this vibration is directed towards the side from whence the electricity was once drawn off, which therefore becomes electrified negatively.

(272.) "Thus may we understand how a pane of glass, or any other electric, may receive a positive electricity on the one side and negative on the other, to as high a degree as we please. But there is found to be a limit to every charge of electricity we can give; and this limit is the resistance of the air. A phial will contain double the charge in air doubly condensed, that it does in the common atmosphere; and when once the vibration becomes too great to be borne, the positive side of the glass throws out pencils of light, and will receive no more electricity in that state of the atmosphere.

(273.) "Thus, in every charged phial, there is a violent impulse or vibration of the fluid, *outward* from the positive, and *inward* to the negative, side. As long as these continue, the phial continues charged. As the electric fluid seems to be subject to no other natural power, but controls all its own actions only by moving in opposite directions, it is plain, that if a charged phial is carefully kept from any of those means by which it is known to be discharged, it must keep its charge for a long time; and thus, by keeping phials within glass cases, their charge will be retained for six or eight weeks, or perhaps a great deal longer. The only method of discharging a phial, is by making a communication between its coatings. The fluid pressing out of the positive side, now yields to the pressure of that from the negative side, and runs along the conductor. But no sooner does it come near the negative side of the phial, than, meeting with more of the same kind, the current of which is directed the same way, both together break through the air with a violent flash and crack, and all appearances of electricity cease.

(274.) "In this, as in all other electrical experiments, it is easy to see, that the force, velocity, &c. of the fluid depends entirely on the pressure of that which surrounds it. Nature hath appointed a certain constitution or modification of the electric fluid in all terrestrial bodies, and likewise

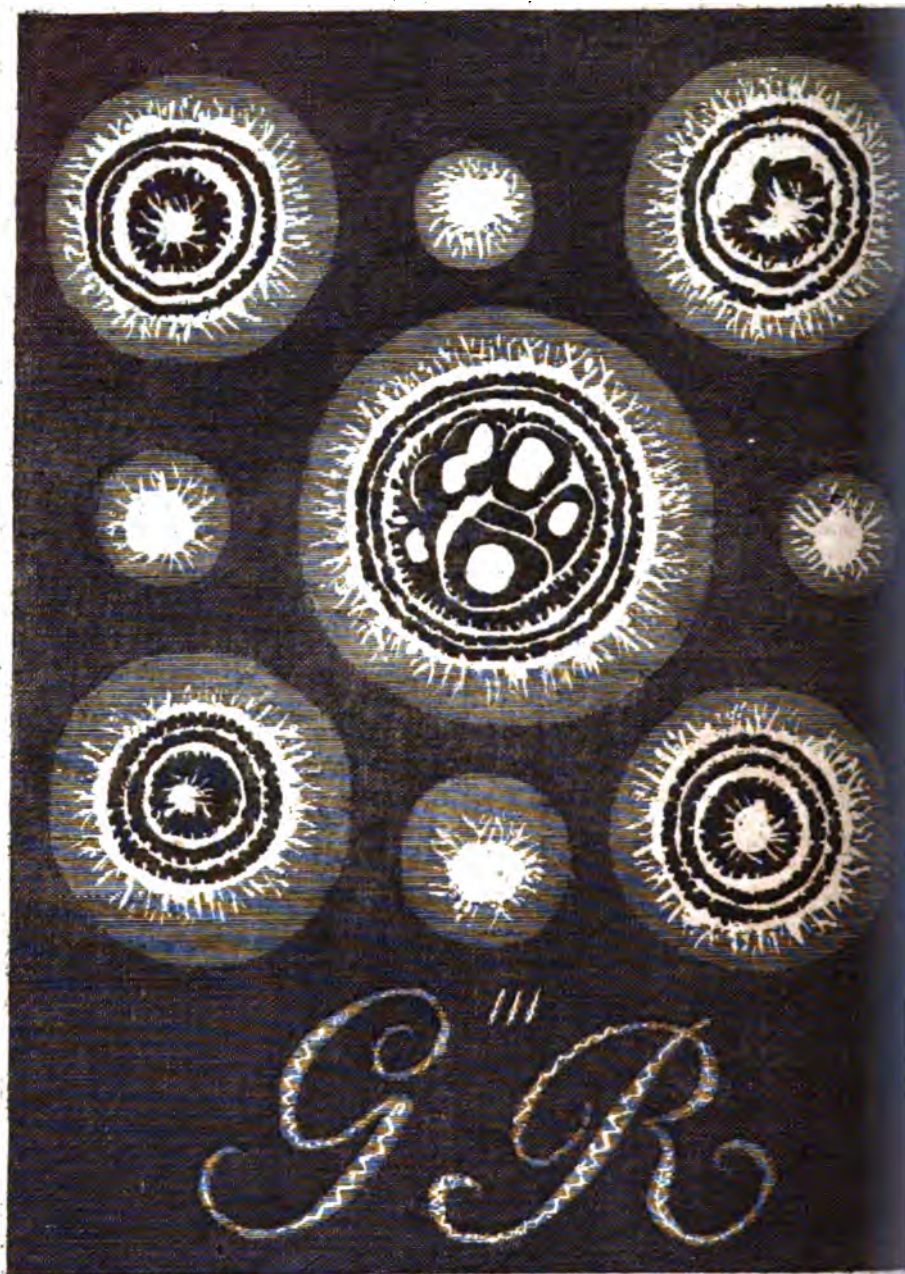
all round the earth. In our electrical experiments we violate this constitution in some degree. When this violation is but small, the powers of nature operate gently in repairing the disorder we have introduced; but when any considerable deviation is occasioned, the natural powers restore the original constitution with extreme violence."

SECT. XIII. Of the VARIOUS USES of the ELECTRIC FLUID in the SYSTEM of NATURE.

(275.) We cannot conclude the theoretical part of this treatise, without giving a general view of the uses of the electric fluid in the system of nature. "These, says Mr Tytler, are so many and so various, that it may be said without much exaggeration, that whether we look to the heat above or to the earth beneath, we can scarce perceive any thing that is not acted upon, and in a manner perfectly subjected to the operation of this wonderful fluid. If we attend to the phenomena of our atmosphere, experiments show that electricity is connected with every one of them. If we evaporate water by heat, it appears from the experiments of M. SAUSSURE, that a fire of electricity is produced. If vapour is condensed into rain, a quantity of electricity is also produced; and if water is frozen into ice, if it defects in hail or snow, electricity appears to be equally concerned. When clouds emit their electric great quantities, they instantly dissolve in a rain which is more or less heavy according to the quantity of electricity discharged, as in thunder storms; and when this quantity is excessive, a great number of discharges are often made before the storm can descend."

(276.) Hence it is reasonable to conclude, though heat (or the electric fluid moving from a centre to a circumference) may be the cause of the first rise of vapour, it is the same electric fluid moving in a different manner, which unites with the air so as to be perfectly dissolved and become transparent in it. This is confirmed by observation under the article CLOUD, (§ 3.) viz. that small clouds floating in the atmosphere will frequently be seen to attract one another, so meet together; after which, if they have been of nearly an equal size, both will instantly vanish. Transparency itself, as we have seen in many instances, depends on the vibratory motion of the electric fluid; and we may conclude from analogy that it does so in all. In the case of vapour dissolved in the atmosphere, therefore, as long as this particular motion continues through it, the vapour remains dissolved and transparent; when the electricity assumes the other motion of which it is exceedingly susceptible, viz. the running in a stream, the vibratory motion ceases, the vapour formerly dissolved loses its transparency, and appears in the form in which it was originally raised by heat, viz. that of an open smoke or mist. As this mist must always be electrified (for it is in the disposition of the fluid to fly to a distant place that electricity consists,) the fluid then begins to exert its power of attraction, and the mist collects in bodies larger or smaller according to the quantity of motion with which the electric matter is affected; and thus we see how by means of this disposition of the fluid, clouds





weather, rain, or the most violent thunder storms may be produced.

(177.) On looking farther into the operations of nature, we find the electric fluid acting in a still higher capacity, and regulating the temperature of the different climates, throughout the world. We need not here repeat what has been already observed, (SECT. III.) concerning the operations of the universal fluid, in the different forms of fire, and cold. If the reasoning there advanced by Mr Tytler is just, the conclusion must necessarily be, that this powerful fluid regulates the light and heat of the sun throughout the whole world, and is itself regulated by them.

(178.) In the earth, we find the electric matter more concerned than in the atmosphere. Its violent motion (which seems to be the cause of the electricity,) is sometimes augmented to a great degree, as in the waters of the ocean, which become unusually clear before tempests and hurricanes. It is in producing earthquakes is explained under the article EARTHQUAKE, § 20—well as in setting fire to volcanoes, under the article VOLCANO. Like other fluids, its action is to gain a great increase of power when it is conveyed in a considerable way along any conductor, and may be easily conceived from considering the substance along which it runs is every where assisted by a fluid of the same kind, which greatly accelerates its motions, and at last gives it an intensity capable of acting as the most violent fire. The fact has been long observed, and confirmed by the experiments of Mr WILSON in the Pantheon as well as by those of later times. In the former the spark taken from the conductor, of 155 feet in length, was so great that it resembled the discharge of a large battery rather a small battery; and was so very violent, that few who had tried it once would repeat it on a second experiment. The latest experiments were made with a number of tin conductors joined to each others ends; in which situation it was found that the spark taken from them was much stronger than when they were laid at a distance from each other, though the surface was in both cases equally the same. Hence we see, that if by the electric fluid shall meet with an unobstructed conductor for a considerable way in the earth, the extremity of that conducting body may be heated, set on fire, or violent explosion from it; and the same thing will take place in the atmosphere. Upon this principle then we account for natural hot baths; explosions arising from the earth; clouds and whirlwinds, and with an enormous quantity of electric discharges, &c.

Thus to the action of the electric fluid we may ascribe the temperature of the air throughout the globe; all the phenomena of rain, snow, hail, tempests, and in all probability the winds, or the currents of the air itself. Certainly it is at least, that every electrified substance has an atmosphere round it resembling a gentle blast of cool air; and it is also very remarkable that the electric fluid itself cannot be blown away from any substance, even by the most violent blast of air we can imagine. An undoubted evidence of this is, that if we set up a small ball or pointed

body upon the conductor of a strong machine, so that a stream of electric light may issue from it, it will not be in our power to turn this flame aside in the smallest degree, by the most violent blast of a bellows. On the contrary, if any body is presented to it, which has a tendency to attract, the former will move across the blast of air, directly contrary to it, or in the same direction with it, in the very same manner as if there were no blast. As the electric fluid therefore acts independent of the air, and cannot have its motions controlled by it, it is highly probable, that all the motions of the atmosphere are controlled by this fluid alone: and indeed if we allow it to be the proper antagonist to the light of the sun itself, we must readily allow it also to be the regulator of every other power on earth.

(280.) Vegetation has also been ascribed to the electric fluid, tho' we cannot certainly say that it is the original cause of this process. It seems, however, to be the true cause of CRYSTALLIZATION; which, as remarked under that article, probably is only an incipient or imperfect vegetation. The most convincing proof of this is from the experiments of Mr LICHTENBERG with a large electrophorus; in which the knob of an electrified phial being drawn over the surface of the electric plate, finely powdered rosin afterwards sifted upon the plate assumed the figure of stars and other beautiful ramifications, indicating not only an inclination to arrange itself in the same regular order with the crystals of salts, but to run out into branches like those of vegetables.

(281.) These experiments have been repeated to great advantage by the rev. Mr BENNET, according to whose method the figures represented in Plate CXXXVI. were made. The apparatus for making them consisted only of a Leyden phial, and a plate of glass 15 inches square covered on one side with a varnish of gum-lac dissolved in spirit of wine, and several times laid over. Two ounces of shell-lac powdered and mixed with six ounces of spirit of wine answers very well for this purpose. The glass must be warmed, and the varnish spread upon it with a camel's hair pencil. Care must be taken, however, not to lay it on too thick, otherwise the effect will not follow. The side is covered with tin foil laid on with common paste. When it is to be used, the glass plate is put upon a metallic stand with the tin-foiled side laid undermost; the phial is to be charged, and the knob drawn over the varnished side. Thus any kind of figure may be drawn or letters made as represented in the plate; and from every figure beautiful ramifications will proceed, longer or shorter according to the strength of the charge. On some occasions, however, the charge may be too strong, particularly where we wish to represent letters, so that the whole will be blended into one confused mass. The round figures are formed by placing metallic rings or plates upon the electrical plate; and then giving them a spark from the electrified bottle, or sending a shock through them. The figures may be rendered permanent by blowing off the loose chalk, and clapping on a piece of black sized paper upon them; or if they are wanted of another colour, they may easily be obtained by means of lake, vermilion,

rose-pink, or any of the ordinary colours ground very fine. The easiest way of applying them seems to be by a barber's puff-bellows.

(282.) This tendency of the electrical fluid to produce ramifications in its passage through other substances, is likewise evident from the figure of the positive flames described by Mr Nicholson, and represented *Plat. CXXVII.* It may indeed be objected, that in both cases the fluid has to make its way through non-conducting substances, where it meets with a considerable resistance; so that the case cannot be applicable to vegetation, where a ready conductor is always found in the moisture with which the earth abounds. But if we consider that the earth, and every thing contained in it, are already saturated with electric matter, it must readily appear that no new quantity can be forced into it without meeting with a considerable resistance; and therefore it will branch out and divaricate in the very same manner when passing through the earth, that it does when artificially sent through the air, or made to diffuse itself on the surface of an electric substance. If, in the earth it meets with such particles as serve to facilitate its passage, these will be arranged according to the direction of the fluid itself; and thus these particles being consolidated by other powers, or by electricity itself acting in a different manner, may be supposed to assume the figures of branched roots; while the continual accumulation of new matter augments them in bulk, and is what we call the *growth* of the plant, or its drawing nourishment from the ground.

(283.) We cannot, indeed, explain the manner in which plants grow; the utmost we can do is to attain some slight and general idea of the cause, and how by the action of that cause, directing itself according to the laws given it by the Author of nature, the effects may be produced. This is sufficient to satisfy the curiosity natural to the human mind: a farther knowledge would not only be entirely useless, but in all probability is inconsistent with the limited state of our faculties at present. What is here said concerning vegetation, may be applied equally to the formation and growth of animal bodies; but this subject is still more obscure and difficult; it has been supposed by many, however, that the nervous fluid is the same with that of electricity; for which many probable reasons might be assigned, though the subtilty and invisibility of both must for ever prevent us from obtaining any direct proof on this subject.

(284.) When we consider the rest of the terrestrial phenomena, we find the same fluid concerned in every one of them, or rather acting as their only cause. There is not in nature a more surprising phenomenon than that of the magnet; and this, by repeated experiments, has been proved to depend on electricity. Magnetical needles have often been endowed with their virtue by means of artificial electricity, and iron has been known to receive it from lightning; whence we may reasonably conclude, that the power of the magnet at all times depends upon the secret operation of the electric fluid. By extending its power to the production of attractive and repulsive forces in all cases, and which from many natural phenomena

is extremely probable, we may suppose it to have a still higher rank in the system of nature, guiding the planets in their courses through the heavens, and giving stability and cohesion not only to terrestrial substances, but to the globe of earth itself and to all other bodies in the universe.

(285.) Count TRESSAN began a system of natural philosophy on this principle in 1777, and published it several years ago. In this the electric fluid is considered as the first principle of motion in the universe, and the immediate agent by which the system of nature is governed. According to him, the fixed stars themselves are no other than as many foci of action communicating motion to their surrounding planets, which have their atmospheres of different extents. He illustrates the operations of this fluid in all the different phenomena of earth, air, water, fire, &c. down even to the most minute, as well as even to the most grand and sublime exhibitions of nature. That the electric fluid is capable of imitating all of these phenomena, is certain. By means of the same fluid also we may imitate the planetary motions; and for this several contrivances have fallen upon: the principal are as follow.

(286.) I. From the prime conductor of an electric machine suspend six concentric hoops of metal at different distances from one another, in a manner as to represent in some measure the proportional distances of the planets. Under and at the distance of about half an inch from the innermost metallic plate, and upon this plate, within the hoops, a glass bubble blown very small, and light. On electrifying the hoops, the bubble will be immediately attracted by them, and will continue to move round the hoops as long as the electrification continues. If the electricity is strong, the bubbles will frequently be directed to run hither and thither on the plate, making a variety of surprising motions round their centre, which they will return to the hoop, and move as before; and if the room is darkened, they will all appear beautifully illuminated with electric light.

(287.) II. Provide a ball of cork about three quarters of an inch in diameter, hollowed out in the internal part by cutting it in two halves, and scooping out the inside, and then joining the two together with paste. Having attached this to a thread between 3 and 4 feet long, suspend it in such a manner that it may just touch the knob of an electric jar, the outside of which communicates with the ground. On the first contact the ball will be repelled to a considerable distance, and after making several vibrations will remain stationary; but if a candle is placed at some distance behind it, so that the ball may be between the candle and the bottle, the ball will instantly begin to move, and will turn round the knob of the jar, moving in a kind of ellipsis as long as there is any electricity in the bottle. This experiment is very striking, though the motions are far from being regular; but it is remarkable that they always assume the *elliptical* rather than the circular form.

(288.) III. Cut a piece of India paper in the shape of an isosceles triangle, whose sides are about two inches long, and two tenths of an inch in breadth; then erect a brass ball of 2 or 3 inches diameter



Fig. 2.



Fig. 3.



Fig. 5.



Fig. 6.



Fig. 8.



Fig. 10.

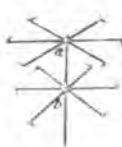


Fig. 11.

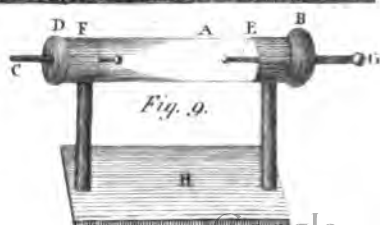


Fig. 9.



meter on a brass wire one sixth of an inch in thickness, and two feet six inches long, on the same conductor: electrify the conductor, and then bring the obtuse end of the piece of paper within the atmosphere of the ball; let it go, and it will revolve round the ball, turning often round its own axis at the same time.

(189.) We shall not here enter into any speculations, concerning the way in which it might be supposed possible, to produce the planetary motions by the efflux of the sun's light, and the return of the electric fluid towards him. Before we attempt to make excursions into these celestial regions, it is necessary to remove an objection derived from Mr Morgan's experiment, that the electric fluid cannot pervade a perfect vacuum; and from which he concludes, that the electric fluid cannot pass beyond the limits of our atmosphere. On this experiment, however, we must observe, that though it was really proved, in a much more decisive manner than is done by Mr Morgan, that the fluid cannot be artificially driven through a vacuum, this would not prove that it cannot naturally pass through it, as we cannot suppose the powers of nature and of art to be equal. But even the powers of art, in Mr Morgan's experiment, have not a fair chance of success, is evident from an inspection of fig. 7. Plate CXXV. He endeavours to force the electric fluid through a long course of perfect vacuum, and finds the power of his machine insufficient for the purpose. Yet one of Mr Morgan's own experiments have led him to vary this one in such a manner as would perhaps have shown the possibility of transmitting the fluid through the most perfect vacuum that can be made.

(190.) He informs us, that a spark, which in open air cannot exceed one quarter of an inch in length, will appear to fill the whole of an exhausted receiver 4 inches wide and 8 inches long; though in the latter case it will be excessively faint in comparison with what it would have been in the atmosphere: yet, in order to prove that the faintness of the electric light *in vacuo* depends on the enlarged space through which it is diffused, he has only to introduce two pointed wires into the vacuum, so that the fluid may pass from the end of the one to the point of the other; and as the distance between them is not more than the breadth of an inch, in this case we shall find the light as bright as in the open air. The inference is derived from this experiment is obvious. Mr Morgan, instead of attempting to cause the fluid pass through the whole length of the vacuum, put two wires in the inside at a small distance from each other, as described in the experiment just mentioned, it is very probable that the fluid would have made its way through that small space.

(191.) But even granting Mr Morgan his conclusion, that there is a vacuum (which he cannot prove,) beyond the limits of our atmosphere, in which the electric fluid belonging to our system cannot pass, still it will prove nothing against the existence of this fluid. The light of the sun doubtless fills the atmospheres of all the other planets with quantities of the electric fluid proportionate to their size; and if, as is supposed

from analogy, and generally believed by astronomers, the fixed stars are all so many suns, in the centres of other solar systems, giving light to myriads of other worlds, which circulate round them, there will be no occasion for the electric fluid belonging to our globe to go beyond its atmosphere, as every planet in the infinity of space will thus be furnished with a sufficient quantity of it, within its own atmosphere, to answer every purpose of nature.

(192.) "On the whole," says Mr Tytler, "we cannot from this experiment of Mr Morgan's or indeed any other, argue against the possibility of the passage of the electric fluid from any part of the creation to another. We cannot force it, it is true, because it is disposed by its own natural laws to resist our efforts; but where it is disposed by these laws to yield in one place, there will undoubtedly be a current of it thither from some other, which we would find ourselves equally unable to stop by all the machines that ever have been or will be invented. There is as yet therefore not the least proof that the electric fluid does not pervade the most distant regions of space, and there perform all those great operations which have been ascribed to unknown and inexplicable powers." For a further account of the operations of this fluid in producing the phenomena of nature, see the articles ATMOSPHERE, AURORA BOREALIS, EARTHQUAKE, HAIL, HURRICANE, LIGHTNING, METEOR, RAIN, SNOW, &c.

PART III.

PRACTICE OF ELECTRICITY.

SECT. I. Of the CONSTRUCTION of the ELECTRICAL APPARATUS in GENERAL.

(193.) ELECTRICITY being almost entirely a new science, perhaps no other branch of natural philosophy requires a more close application in the student, to acquire an accurate knowledge of the practical part of it. He should not only be possessed of a general knowledge of the best apparatus now in use, but should also be acquainted with the method of constructing the different machines, in order that he may have it in his power to alter, correct, or improve any part of them, as occasion may require, or discoveries may seem to indicate a necessity of doing. The most important consequences often flow from a slight and seemingly trifling alteration in the electrical machinery.

(194.) The practical part of electricity naturally divides itself into two branches; viz. the apparatus employed, and the experiments made with it; but the use and application of the former being best illustrated by the latter, we thought it improper to separate them. Mr Cavallo subdivides the former into 3 classes; viz. 1. The instruments necessary to produce electricity: 2. Those proper to accumulate, retain, and employ it, and 3. Those necessary to measure its quantity, and ascertain its quality.

(195.) The instruments principally used to produce electricity are called by way of emphasis *Electrical Machines*. They are made in so many different forms, that it would be tedious and difficult

sult to give only a very short description of them all. We shall therefore first lay down the most necessary rules for constructing electrical machines in general; and then give a particular description of those, which are most generally useful, and contain the latest improvements.

(296.) The principal parts of the electrical machine are the electric, the moving engine, the rubber, and the prime conductor, *i. e.* an insulated conductor, which immediately receives the electricity from the excited electric.

(297.) ELECTRICS were formerly used of different substances, as glass, rosin, sulphur, sealing wax, &c. Their forms were also various, as globes, cylinders, spheroids, &c. The reason of this variety was, 1st, that it was not then ascertained what substance acted most powerfully; and 2dly, to produce a positive or negative electricity at pleasure. At present smooth glass only is used; for when the machine has an insulated rubber, the operator may produce positive or negative electricity at his pleasure, without changing the electric; which clearly proves the falsity of those systems of electricity, which are founded upon the supposition of a specific difference between *vitreous* and *resinous* electricity, as arising from the nature of the different substances producing them.

(298.) As for the FORM of the glass, those commonly used at present are globes and cylinders. The most convenient size for a globe, is from 9 to 12 inches diameter. They are made with one neck, which is cemented to a strong brass cap in order to adapt them to a proper frame. The best cement for electrical purposes is made with two parts of rosin, two of bees-wax, and one of the powder of red ochre. These ingredients are melted, and mixed together in any vessel over the fire; and afterwards kept for use. This kind of cement sticks very fast; and is much preferable to rosin only, as it is not so brittle, and at the same time insulates equally well.

(299.) The CYLINDERS are made with two necks; they are used to the greatest advantage without any axis; and their common size is from 4 inches diameter and 8 inches long, to 12 inches diameter and 2 feet long. Very large cylinders, should be strengthened by a glass axis; *viz.* a solid stick of glass from the one cap to the other. The glass generally used is the best flint; though it is not absolutely determined which kind of metal is the best for electrical globes or cylinders. The thickness of the glass seems immaterial, but perhaps the thinnest is preferable. It has often happened, that glass globes and cylinders, in whirling, have burst in pieces with great violence, and with no small danger to the by-standers. Those accidents are supposed to happen when the globes or cylinders, after being blown, are suddenly cooled. The workmen should therefore be enjoined to let them pass gradually from the heat of the glass house, to the temperature of the atmosphere.

(300.) Electricians are not agreed, whether a lining of some electric substance, as rosin, turpentine, &c. on the inside surface of the glass, has any effect to increase its electrical power; but it seems pretty well determined, that if it does not increase the power of a glass globe or cylinder, at

least it considerably improves a bad one. The most approved composition for this purpose, made with 4 parts of Venice turpentine, one part of rosin, and one part of bees wax. This composition must be boiled for about two hours on a gentle fire, and stirred very often: afterwards is left to cool, and reserved for use. When a globe or cylinder is to be lined with this mixture, a sufficient quantity of it is to be broken into small pieces, and introduced into the glass; then, holding the glass near the fire, the mixture is melted, and equally spread over all its internal surface to about the thickness of a sixpence. In this operation, care must be taken that the glass be heated gradually, and be continually turned, so that it may be heated equally in all parts, otherwise it is apt to break in the operation.

(301.) As to the engine which is to give motion to the electric, multiplying wheels have been generally used, which, properly adapted, may give the electric a quick motion, while they are conveniently turned by a winch. The usual method is, to fix a wheel on one side of the frame of the machine, which is turned by a winch, and has a groove round its circumference. Upon a brass cap of the neck of the glass globe, or one of the necks of the cylinder, a pulley is fixed, whose diameter is about the 3d or 4th part of the diameter of the wheel: then a string or strap is passed over the wheel and the pulley; and, by this means, when the winch is turned, the globe or cylinder makes 3 or 4 revolutions for one revolution of the wheel. One inconvenience generally attends this construction; *viz.* that the string is sometimes so very slack, that the machine cannot work. To remedy this, the wheel should be made moveable with respect to the electric, that by means of a screw it may be fixed at a proper distance; or else the pulley should have several grooves of different radii on its circumference.

(302.) Some turn the cylinder simply with a winch, without any accelerated motion; but this seems not sufficient to produce the greatest electric power that glass is capable of giving; for the globe or cylinder should properly make about 10 revolutions in a second, which is more than can be conveniently done with the winch only. This method, however, on account of its simplicity and easy construction, should not be disregarded, and it may be preferred when no very great power is required. Instead of the pulley and string, a wheel and pinion, or a wheel and an endless screw has been used. This construction may answer tolerably well for small table machines; but it must be constructed with great nicety; otherwise it is apt to make a disagreeable rattling, and without frequent oiling, soon wears away by the great friction of its parts.

(303.) "THE RUBBER, as it is now made, (says Mr Cavallo,) is nothing more than a silk cushion stuffed with hair; and over this is put a piece of leather, on which some amalgam has been rubbed, so as to stick as fast as possible to the leather. Sometime ago it was generally used, and it is now customary also, to make the rubber of red *Begonia* stuffed with hair; but the silk one, as above described (which is an improvement of the

(306.) is much preferable. If this silk cushion, in account of adapting it to the surface of the plate, is to be fixed upon a metal plate, then care should be taken to make the plate free from sharp points, edges, or corners, and it should be as much as possible concealed, or covered with silk. In order to construct the rubber properly, it must be made in such a manner, that the side of it, which the surface of the glass enters in whirling, may be as perfect a conductor as it can be made, in order to supply electricity as quick as possible; and the opposite part should be as much a non-conductor as possible, that none of the fluid may run back to the rubber; which has been found to be the case, when the rubber is not made in a proper manner; for which reason a piece of silk is added to the extremity of the leather.—Mr. Higgins's rubber consists of silk only put over the leather cushion, and very little amalgam is used with it."

(307.) Any metal dissolved in quicksilver, will form an AMALGAM, but the one that has been generally used is made with two parts of quicksilver, and one of tin foil, with a small quantity of powdered chalk mixed together in a mass like paste.

(308.) The best kind of amalgam is that of Dr. Higgins, composed of zinc and quicksilver; if a little of the latter be added to melted zinc, it becomes easily pulverable, and more quicksilver is added to the powder, if we want to make a soft amalgam. It is apt to crystallize by standing, which seems in some measure to be prevented by triturating it with a small proportion of oil: and it is always of advantage to triturate it before using. The proportion prescribed by Dr. Higgins, is one part of zinc to 4 or 5 parts of mercury. *Aurum mosaicum*, or mosaic gold, answers nearly as well, though it is not quite so clean.

(309.) The method of using the amalgam is by spreading it on a separate piece of leather, and applying it occasionally to the under part of the cylinder while turning. Thus only a very small part of the amalgam is consumed, at the same time that the glass is very powerfully excited.

(310.) The rubber should be supported by a stand; by which it will easily suit any inequality that may be on the surface of the glass; and by a screw, it may be made to press more or less, as occasion requires. It should also be insulated in the most perfect manner; as, when insulation is not required, it may be easily taken off by a string or wire hung upon it, and thus communicate with the earth or any unelectrified body; but where there is no contrivance for insulating the rubber, it is impossible to perform many of the most curious electric experiments.

(311.) A considerable improvement has been made by Mr. WILLIAM JONES of London, on the part of electrical machines, by a very simple contrivance. It consists in a spring placed within the rubber itself; the action of which is found to be better suited for adapting the rubber to the inequalities of the glass, than that placed entirely without the rubber. It consists of a piece of flexible iron or brass, represented edgewise by A, fig. Plate CXXV. It acts in a much more parallel and uniform manner than the former, which

is constantly changing the pressure of the line of contact betwixt the rubber and cylinder while it passes from the under to the upper side, and thus rendering the effect inconstant and uncertain.

(312.) The PRIME, or first CONDUCTOR, is an insulated conducting substance, furnished with one or more points at one end, to collect the electricity immediately from the electric. When it is wanted of a moderate size, it is usual to make it of hollow brass; but when it is intended to be very large, then, on account of the price of the materials, it is made of pasteboard covered with tin foil or gilt paper. It is generally made cylindrical; but let the form be what it will, it should always be made perfectly free from points or sharp edges: and if holes are to be made in it, which on many accounts are very convenient, they should be well rounded, and made perfectly smooth. That end of it which is at the greatest distance from the electric ought to be made larger than the rest, as the strongest exertion of the electric fluid to escape from the conductor is always at that end.

(313.) The larger the prime conductor is, the longer and denser a spark can be drawn from it, the quantity of electricity discharged in a spark, being nearly proportional to the size of the conductor. On this account, the prime conductor is now made much larger than formerly. Its size, however, may be so large, that the dissipation of the electricity from its surface, may be greater than the electric can supply; in which case, the increase of size would only render it an unwieldy and unnecessary incumbrance.

(314.) Besides the above mentioned parts, it is necessary to have a strong FRAME to support the electric, the rubber, and the wheel. The prime conductor should be supported by stands, with pillars of glass or baked wood, and not by silk strings, which admit of continual motion. In short, the machine, the prime conductor, and any other apparatus actually used, should be made to stand as steady as possible, otherwise many inconveniences will arise.

(315.) Every electrician should be provided with GLASS TUBES of different sizes, a pretty large stick of sealing wax, or a glass tube covered with sealing wax, for the negative electricity. He should, at least, not be without a glass tube about 3 feet long and 1½ half inch in diameter. This tube should be closed at one end, and at the other end should have fixed a brass cap with a stop-cock; which is useful in case it should be required to condense or rarify the air within the tube. The best rubber for a tube of smooth glass is the rough side of black oiled silk, especially when it has some amalgam rubbed upon it; but the best rubber for a rough glass tube, a stick of baked wood, sealing wax, or sulphur, is soft new flannel.

(316.) The most proper instruments for what is called the accumulation of electricity are COATED ELECTRICS; among which, glass coated with conductors obtains the principal place: on account of its strength, it may be formed into any shape, and it will receive a very great charge. The form of the glass is immaterial with respect to the charge it will contain; its thickness only is to be considered: for the thinner it is, the more easily

will it receive the utmost charge it can bear; but it is at the same time more subject to be broken. For this reason, a thin coated jar or plate may be used very well by itself, and it is very convenient for many experiments; but when large batteries are to be constructed, it is necessary to use glass a little thicker, and care should be taken to have them perfectly well annealed.

(314.) If a BATTERY be required of no very great power, as containing about 8 or 9 square feet of coated glass, common pint or half pint phials may be used. They may be easily coated with tin foil, sheet lead, or gilt paper, on the outside, and brass filings on the inside: they occupy a small space, and, on account of their thinness, hold a very good charge. But when a large battery is required, these phials cannot be used, for they break very easily; and for that purpose, cylindrical glass jars of about 15 inches high, and 4 or 5 inches in diameter, are the most convenient.

(315.) In coating glass plates or jars, which have a sufficiently large opening, the best method is to coat them with tin foil on both sides, which may be fixed upon the glass with varnish, gum water, bees wax, &c. but if the jars have not an aperture large enough to admit the tin foil, and an instrument to adapt it to the surface of the glass, then brass filings may be advantageously used. These may be stuck on with gum water, bees wax, &c. but not with varnish, for this is apt to be set on fire by the discharge. Care must be taken that the coatings do not come very near the mouth of the jar, for that will cause the jar to discharge itself. If the coating be about two inches below the top, it will in general do very well: but there are some kinds of glass, especially tinged glass, that when coated and charged, have the property of discharging themselves more easily than others, even when the coating is 5 or 6 inches below the edge.

(316.) When a jar discharges itself, the electric fluid runs from the inside to the outside coating over the surface of the glass where it leaves an indelible mark all along its path, generally of a zig-zag form. There is another sort of glass, like that of which Florence flasks are made, which, on account of some unvitrified particles in its substance, is not capable of holding the least charge. On these accounts, therefore, when a great number of jars are to be chosen for a large battery, it is advisable to try some of them first, so that their quality and power may be ascertained.

(317.) Many attempts have been made by electricians to find some other electric, which might answer better than glass for this purpose, at least in point of cheapness; but, except Father BECCARIA's method, which may be used very well, no remarkable discovery has been made relating to this point. He took equal quantities of very pure colophonium, and powder of marble, sifted exceedingly fine, and kept them in a hot place a considerable time, where they became perfectly free from moisture: he then mixed them, and melted the composition in a proper vessel over the fire; and, when melted, poured it upon a table, upon which he had previously stuck a piece of tin foil, reaching within 2 or 3 inches of the edge of the table. He then, with a hot iron spread the mixture all over the table as

equally as possible, to the thickness of one tent of an inch: he afterwards coated it with another piece of tin foil reaching within about two inches of the edge of the mixture: in short, he coated plate of this mixture like a plate of glass. The coated plate seems to have had a greater power than a glass plate of the same dimensions, even when the weather was not very dry: and if it is not subject to break very easily by a spontaneous discharge, it may be very conveniently used; for it doth not very readily attract moisture, and consequently may hold a charge of electricity better and longer, than glass: besides, if broken, it may be repaired by a hot iron; which is not the case with glass.

(318.) For discharging a jar, battery, or any coated electric without receiving the shock, two instruments have been contrived, one called the common *Discharging Rod*, Pl. CXXV. fig. 9. which is nothing more than a femicircular brass wire, furnished with two brass balls, one at the end of each wire. The other, which is of very extensive use in electrical experiments, is called the *Jointed Discharging Rod*. See fig. 10. It is furnished with a handle; the legs are moveable, and may be set any distance that may be convenient.

(319.) When the electrician is to use this instrument, he holds it by the handle; and touching one of the coated sides of the charged electric with one knob, and approaching the other knob to the other coated side, or some conducting substance communicating with it, he completes the communication between the two sides, and thus discharges the electric.

(320.) The instruments for measuring the quantity, and ascertaining the quality, of electricity, are called ELECTROMETERS. These are of 4 sorts: 1. The single thread; 2. The cork or pith ball; 3. The quadrant; and, 4. The discharging electrometer. The cork ball electrometer was invented by Mr CANTON; the discharging electrometer by Mr LANE, and since improved by Mr HENRY; another on a different principle by Mr KINNEY; and the quadrant electrometer, which, of latest invention, is a contrivance of Mr HENRY.

(321.) The electrician ought to have always at hand, not only the instruments and machinery necessary to perform the common experiments; but likewise several plates of glass, jars of different sizes, a variety of different instruments of every kind, and even tools for constructing them, so he may readily make such new experiments as his curiosity may induce him to try, or that may be published by others who are pursuing their researches in this branch of philosophy.

SECT. II. Of the MOST USEFUL and APPROVED ELECTRICAL MACHINES.

(322.) Very essential alterations and improvements have been made within these few years, in the construction of electrical machines, by several eminent electricians; and particularly by Messrs Adams, Nairne, and Jones, instrument-makers at London, the principal of which we shall here describe.

(323.) The first that merits our attention, however, is that described by Dr PRIESTLEY in his *History of Electricity*, which on account of its extent



Fig. 2

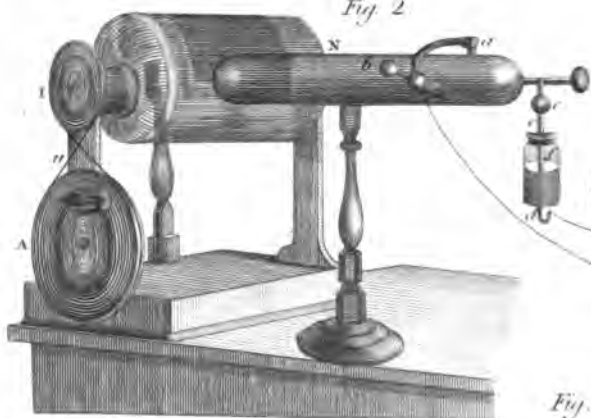


Fig. 8



Fig. 3

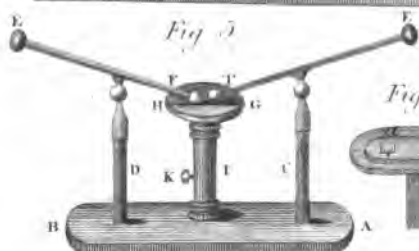


Fig. 6.



Fig. 7.



Fig. 9.



Fig. 10.



Fig. 3.



Fig. 4

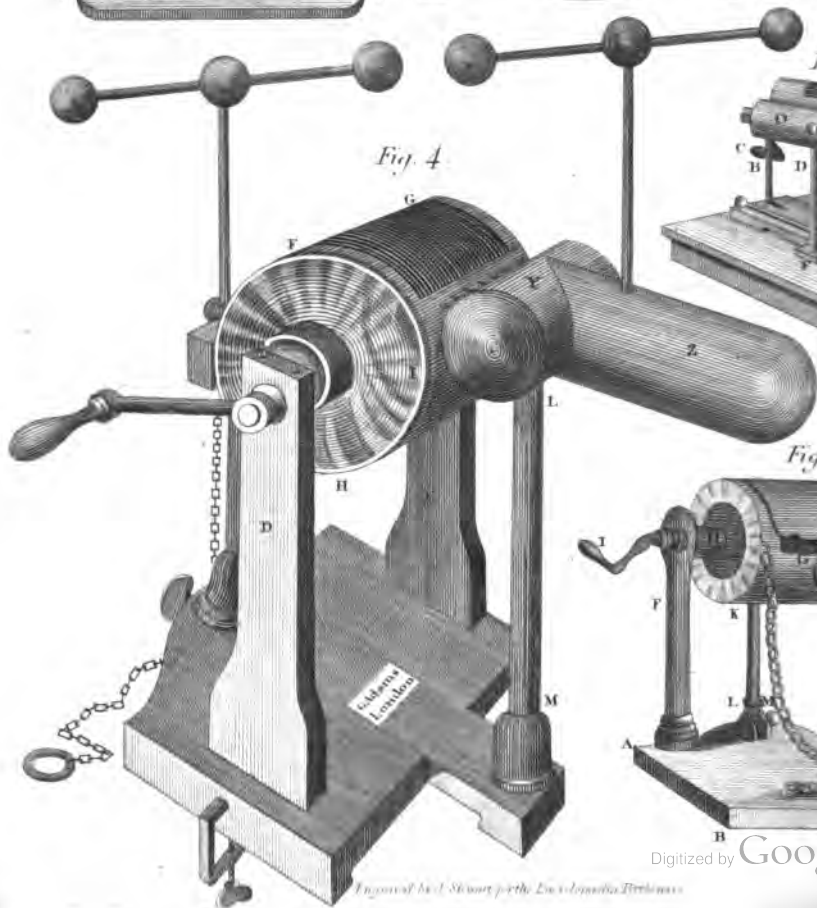


Fig. 1.



tensive use, may be deservedly called the **UNIVERSAL ELECTRICAL MACHINE**. The basis consists of two oblong boards *a a*, which are placed in a situation parallel to one another, about 4 inches asunder, and kept in that position by two pieces of wood adapted for the purpose. These boards, when set horizontally on a table, and the lowermost of them fixed with iron cramps, form the support of two perpendicular pillars of baked wood, and the rubber of the machine. One of the pillars, together with the spring supporting the rubber, slides in a groove *a*, which reaches almost the whole length of the upper board; and, by means of a screw, may be placed at any required distance from the pillar *b*, which is fixed, being put through a mortice in the upper board, and fastened to the lower. In these two pillars are several holes for the admittance of the spindles of different globes; and as they may be situated at any distance from one another, they may be adapted to receive not only globes, but cylinders and spheroids of different sizes. "In this machine (says Dr Priestley) more than one globe or cylinder may be used at once, by fixing one above the other in the different holes of the pillars; and by adapting to each a proper pulley, they may be whirled all at once, to increase the electricity." But as the rubbers cannot be conveniently applied, the power of several globes put together in this manner, though greater than one, is by no means equal to what it would be if the power of them all singly were united. *Fig. 12.* represents a machine of this kind invented by Dr Watson.

(324.) "The rubber (adds Dr Priestley) consists of a hollow piece of copper, filled with horse hair and covered with basil skin. It is supported by a socket which receives the cylindrical axis of a round and flat piece of baked wood *g*, the opposite part of which is inserted into the socket of a bent steel spring *b*. These parts are easily separated, so that the rubber, or the piece of wood that serves to insulate it, may be changed at pleasure. The spring admits of a twofold alteration of position. It may be either slipped along the table, or moved in the contrary direction," (the groove being wider than the screw that fastens the spring,) "so as to give it every desirable position with respect to the globe or cylinder; and it is besides furnished with a screw which makes it press harder or lighter as the operator chooses."

(325.) The wheel of this machine is fixed to the table at *e*, and has several grooves for admitting more strings than one, in case that 2 or 3 globes or cylinders are used at a time; and as it is disengaged from the frame of the machine, the latter may be screwed at different distances from the former, and thus suited to the variable length of the string. The chain connected with the rubber at *n* is for making a communication with the table, when insulation is not wanted. The prime conductor is made of copper, hollow, and in the form of a pear; having its neck placed upwards, and its bottom, or rounded part *k*, placed on a stand of glass or baked wood. An arched wire *l* proceeds from its neck, having an open ring at its end, in which some small pointed wires *m* are hung, that by playing lightly on the globe or cylinder collect the electric fluid from it.

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(326.) Another machine has been invented by Dr INGENHOUSZ, which for its simplicity and conciseness makes a fine contrast with the former. It consists of a circular glass plate about one foot diameter, which is turned vertically by a winch fixed to the iron axis that passes through its middle; and it is rubbed by 4 cushions, each about two inches long, situated at the opposite ends of the vertical diameter. The frame consists of a bottom board, about a foot square, or a foot long and six inches broad, which, when the machine is to be used, may be fastened by an iron crank to the table. Upon this board two other slender and smaller ones are raised, which lie parallel to one another, and are fastened together at their top by a small piece of wood. These upright boards support in their middle the axis of the plate, and to them the rubbers are fastened. The conductor is of hollow brass; and from its extremities branches are extended, which, coming very near the extremity of the glass, collect the electricity from it. The power of this machine is perhaps greater than one would imagine from looking at it. Its construction will not easily admit of the rubbers being insulated; and consequently it cannot be adapted to a great variety of experiments; but it is very portable, is not very liable to be out of order, and has a power sufficiently strong for physical purposes.

(327.) A very portable electrical machine invented by Mr READ, and improved by Mr LANE, is represented in *Plate CXXV. fig. 13.* A is the glass cylinder, moved vertically by means of the pulley at the lower end of the axis. This pulley is turned by a large wheel, B, which lies parallel to the table. There are 3 pulleys of different dimensions marked in the figure; one of which revolves four times for every revolution of the large wheel B. The conductor C is furnished with points to collect the fluid, and is screwed to the wire of a coated jar D, which stands in a socket between the cylinder and the wheel. The figure also represents the manner of applying Mr Henly's electrometer to this machine; of which an account is subjoined.

(328.) A most convenient machine for philosophical purposes, and whose power is equal to that of much larger ones of the old construction, is represented in *Plate CXXVIII. fig. 1.* The frame consists of the bottom board ABCD; which, when the machine is to be used, must be fastened to the table by two brass or iron cramps. Upon the bottom board there are two round pillars EF perpendicularly raised; which answer best made of baked wood. These support the cylinder G by the axes of the brass or wooden caps H. From one of these proceeds the long axle I, going through an hole in the pillar F; having a simple winch, L, fixed on its square end; or sometimes, as in *fig. 2.* below a pulley, I. On the circumference of this pulley are several grooves to suit the variable length of the string *u*, which goes round one of them, as well as round the large multiplying wheel A. The other cap of the cylinder has a small cavity which fits the conical extremity of a strong screw proceeding from the pillar. The wheel A, which is moved by the handle, turns round a strong axle proceeding from about the middle of the frame

pillar. In small machines the simple winch may be adopted with great advantage, as is represented in *fig. 1.* as not being liable to disorder; but in large ones the multiplying wheel is indispensably necessary.

(329.) The rubber, in all these machines, is composed of a cushion stuffed with horse-hair or flannel, fastened to a board behind. It is covered with red Basil leather; and from its under edge a piece of black Persian silk is glued, which goes over the cylinder as at *a*, *fig. 1.* to near the points of the collector fixed in the conductor. Thus a greater power of electricity is excited than could have been done by the former machines. In them a piece of leather was fastened to the lower edge of the cushion, bearing against the cushion itself. To this piece of leather another of oiled silk was sewed, covering the cylinder. In this way some amalgam was to be laid upon the piece of leather, and worked into its substance as much as possible; but in the present method nothing more is necessary than to hold an amalgamated piece of leather once or twice to the cylinder while turning. The rubber is fixed to the glass pillar, *K*, (*fig. 1.*) which is fastened into a wooden basis, *L*, at the bottom. This turns on an hinge; and by a screw at *M*, going through the basis to a fixed block on the frame, the pressure of the cushion may be augmented or diminished at pleasure; at the same time that it is rendered much more steady and uniform than by a flat sliding board and tightening screw as formerly used. The glass pillar *K*, as well as all other glass pillars, the glass feet of insulating stools, &c. should be covered with varnish or rather sealing wax; otherwise they will insulate very imperfectly on account of the moisture they attract from the air in damp weather.

(330.) It was usual to support the rubber upon two springs screwed to its back, which proceeded from the wooden cap of the pillar, in order to give way to and suit the inequalities of the glass; but by this contrivance the line of contact with the cylinder was not always the same, nor its pressure uniform. Mr JONES has removed this difficulty by the bent spring represented *fig. 3. Plate CXXV.* It is fixed by a screw at *B*, and gives way by sliding notches at *a a*: its length and breadth are equal to that of the cushion, and its thickness proportional to the diameter and action of the cylinder upon it. In the machine above described, the rubber is well insulated, which is a great advantage when it is necessary to connect with the cushion a conductor, called the *negative conductor*; and when this happens not to be the case, which it usually is in making the common experiments, a chain with a small hook and ring may be hung to one end of the conductor, the other falling upon the table as in *fig. 1. Pl. CXXVIII.*

(331.) In this machine, the prime conductor is represented by *N*, in *fig. 1.* It receives the electric fluid from the cylinder, and is usually made of brass or tin japanned. It is insulated by the glass pillar, *O*, that supports it, and which is screwed into a wooden basis or foot. It is more convenient to place the conductor parallel to the cylinder than with one of its ends towards it. The handle of the wheel *A*, *fig. 2.* or the simple winch *I*, *fig. 1.* should be so turned, that the excited part of the

cylinder may revolve from the rubber to the collecting points of the conductor; the prime conductor, standing then as in the figure, will be electrified positively, or overcharged with the electric fluid: for by the action of rubbing, the cylinder pumps, as it were, the fluid from the rubber, and every other body properly connected with it, and gives it to the prime conductor. But if negative electricity be required, the chain must be removed from the rubber, and hung to the prime conductor: for in this case, the electricity of the prime conductor will be communicated to the ground, and the rubber remaining insulated will appear strongly negative. If another conductor, equal in size to *N*, be connected with the rubber, as strong negative electricity may be obtained from the one as positive electricity from the other.

(332.) An electrical machine, with a conductor in the shape of a T, and an improved medical apparatus, is represented on *Plate CXXVIII. fig. 1.* It is used where it is necessary to give the shock in the arms, and will be particularly explained afterwards, under MEDICAL ELECTRICITY, *Part IV.*

(333.) Mr NAIRNE'S *patent electrical machine for medical purposes*, is exhibited in *fig. 3. Pl. CXXVIII.* Its principal parts are the glass cylinder, generally about 7 inches in diameter and 12 in length, with the two conductors parallel to it. It is furnished with wooden caps, and turns in two wooden pieces cemented on the top of two strong glass pillars *B B*. These pillars are made fast into the bottom board of the machine, which is fastened to the table by means of a crank. There are grooves made in the under part of the bottom of the crank, through which the pieces *F F* slide. On these pieces the pillars stand, by which the two conductors are supported; and in order to place these conductors nearer to the cylinder, or remove them farther from it, the pieces on which the stand are moveable outwards or inwards, and may be fixed by the two screw-nuts *L L*. The rubber is fastened to the conductor *R*, and consists of a cushion of leather stuffed, having a piece of silk glued to its under part. This last being turned over the surface of the cushion, and thus interposed between it and the glass, goes over the cylinder, and almost touches the pointed wires which are fixed on the other conductors, for the purpose of collecting the electric fluid from the cylinder. The conductors are of tin covered with black lacker, each of them containing a large coated glass jar, and likewise a smaller one, or a coated tube, which are visible when the caps *N N* are removed. To each conductor is fixed a knob *Q* for the occasional suspension of a chain to produce positive or negative electricity. That part of the winch *C*, which acts as a lever in turning the cylinder, is of glass. Thus every part of the machine is insulated, the cylinder itself and its brass caps not excepted; by which means the electric fluid has the smallest chance of having any part of it dissipated, and hence the effects are likely to be the more powerful. And to this Mr Nairne has adapted some flexible conducting joints, a discharging electrometer, and other utensils necessary for the practice of medical electricity.

(334.) Of the various electrical machines and apparatus

apparatus that have been invented for the improvement of this science, none is perhaps superior to that of Mr GEORGE ADAMS, a late eminent electrician of Fleet Street, London, and author of several useful works on electricity. This machine is represented in *Pl. CXXVIII. fig. 4.* The parts of the machine, which fall more immediately under our attention, are, 1. The electric, or the glass cylinder which is to be excited. 2. The mechanical contrivances by which it is put in motion. 3. The cushion and its appendages. 4. The conductor, or conductors. The glass cylinder of the machine is put in motion by a simple winch. This is less liable to be out of order, than one that are turned with a multiplying wheel, and also enables us to excite the machine more powerfully. The cylinder, FGII, is supported by two strong perpendicular pieces, DE. The axis of one cap of the cylinder moves in a small hole at the upper part of one of the supports. The opposite axis passes through the upper part of the other support. To this axis the winch or handle is fitted. The cushion is supported and insulated by a glass pillar; the lower part of this pillar is fitted into a wooden socket, to which a regulating screw is adapted, to increase or diminish the pressure of the cushion against the cylinder. A piece of silk comes from the under side of the cushion, and lies on the cylinder, passing between it and the cushion, and proceeding till it nearly meets the collecting points of the conductor. The more strongly this silk is made to adhere to the cylinder, the stronger is the degree of excitation. Before the cylinder, or opposite to the cushion, is a metallic tube YZ, supported by a glass pillar LM. This is called the conductor, and sometimes the *prime conductor*. For the more conveniently trying experiments with this machine, and exhibiting the different states of the cushion and conductor, there are two wires to be fixed occasionally, the one to the conductor, the other to the cushion; on the upper part of these, are balls furnished with sliding wires, that they be set apart from each other at different distances.

(335.) We cannot conclude our description of electrical machines without taking notice of the extraordinary large and powerful one in TEYLER'S MUSEUM at Haarlem; which was constructed by Mr JOHN CURBERTSON, an English mathematical instrument-maker. It consists of two circular plates of glass, each 65 inches in diameter, and made to turn upon the same horizontal axis, at the distance of $7\frac{1}{2}$ inches from one another. These plates are excited by 8 rubbers, each 15 $\frac{1}{2}$ inches long. Both sides of the plates are covered with a resinous substance to the distance of 16 $\frac{1}{2}$ inches from the centre, both to render the plates stronger, and likewise to prevent any of the electricity from being carried off by the axis. The prime conductor consists of several pieces, and is supported by 3 glass pillars 57 inches in length. The plates are made of French glass, as this is found to produce the greatest quantity of the electricity next to English flint, which could not be produced of sufficient size. The conductor is divided into branches which enter between the plates, but collect the fluid by points only from

one side of the plate. The force of two men is required to work this machine; but when it is required to be put in action for any length of time, 4 are necessary. At its first construction 9 batteries were applied to it, each having 15 jars, every one of which contained about a foot square of coated glass; so that the grand battery formed by the combination of all these contained 135 square feet. The effects of this machine were astonishing, (see § 377—380,) but Dr VAN MARUM, who principally made experiments with it, imagining that it was still capable of charging an additional quantity of coated glass, afterwards added to it 90 jars of the same size with the former; so that it now contains a coated surface of 225 feet, and the effects are found to be proportionable.

SECT. III. Of several other NECESSARY PARTS of an ELECTRICAL APPARATUS.

(336.) Besides the electrical machines and other apparatus above described, there are various other instruments necessary for making electrical experiments, and particularly those adapted for the communication of electricity from one body to another. We therefore proceed to describe a few of the most useful of these.

(337.) Mr HENLY'S UNIVERSAL DISCHARGER represented in *Plate CXXVIII. fig. 5,* is an instrument of very extensive use in forming communications between jars, or directing the shock thro' any particular substance. A B is a flat board 15 inches long, 4 broad, and 1 thick, and forming the basis of the instrument. DC are two glass pillars cemented in two holes upon the board AB, and furnished at their tops with brass caps; each of which has a turning joint, and supports a spring tube, through which the wires EF and ET slide. Each of these caps is composed of 3 pieces of brass, so connected with each other, that the wire EF, besides its sliding through the socket, has two other motions, viz. an horizontal one and a vertical. Each of the wires is furnished with an open ring at one end, and at the other has a brass ball; which, by a short spring socket, is slipped upon its pointed extremity, and may be removed from it at pleasure. HG is a strong circular piece of wood five inches diameter, having a slip of ivory inlaid on its surface, and furnished with a strong cylindric foot, which fits the cavity of the socket, I. This socket is fixed in the middle of the bottom board, and has a screw at K; by which the foot of the circular board is made fast at any required height.

(338.) To this instrument belongs a small PRESS, represented in *fig. 6.* It consists of two oblong pieces of wood, which are forced together by the two screws *a a*. The lower end has a cylindrical foot equal to that of the circular table H. When this press is to be used, it must be fixed into the socket I, in place of the circular board HG; which in that case is to be removed.

(339.) The LEYDEN PHIAL, or ELECTRICAL JAR, already repeatedly mentioned, is represented in *fig. 7.* It is chiefly used for the purpose of giving a shock, or of accumulating a quantity of electricity in such a manner as could not be done in any other way, without using an immense extent of electrified surface. This jar is coated on

the outside and lined on the inside with tin foil, to about two inches short of the top, which is stopped with a piece of wood. A wire passes through the wooden top, and is connected underneath with two other wires, which are bent so as to touch the inside coating of the jar; a smooth ball is fixed on the top of the wire.

(340.) There is nothing so formidable amongst an electrical apparatus as the electrical battery, which consists of a number of Leyden jars connected together in a box. See BATTERY, N. II. and *Plate XLII. fig. 1.* By means of this, one may perform a great number of very surprising and interesting experiments; and though, if very large, it be a formidable appendage to an electrical machine, and ought always to be used with caution, yet it cannot be said that the apparatus of an electrician is complete without it. Its effects in rending various bodies, in firing gunpowder, in melting wires, and in imitating all the effects of lightning, are highly curious and interesting.

(341.) To observe, (says that eminent electrician, Mr Cavallo,) "that the metals, even the most purified platina, which resists the greatest efforts of chemic fire, are actually, and almost instantaneously rendered red hot and fused; to see animals destroyed, and to hear the loud report of a large electric battery, are things that always produce a kind of terror in the mind of an attentive observer." It must be confessed, there is much caution necessary in the use and management of a battery, and we should be careful never to make part of the circuit, as well as to prevent those that are seeing the experiments from touching the battery, or approaching too near to any part of the apparatus. The quadrant electrometer should be always used with it; it is best to place it upon the ball, which unites the internal wires, but it should always be elevated two or three feet above the ball. A battery cannot be charged so high in proportion as a single jar; the quadrant electrometer, therefore, never rises so high as 99 degrees, seldom higher than 60 or 70 degrees, more or less, in proportion to the size of the battery, and the force with which the machine acts.

(342.) The most approved construction of this formidable machine is represented in *Plate CXXIX. fig. 1.* It consists of 9 coated jars, so placed that they may all be charged at once, and discharged in an instant; so that the whole power of electricity accumulated in them may be exerted upon the substance exposed to the shock. The jars are connected together by the wires *a, b, c, d, e, f, g, h, i*, all of which are fastened into the wooden stoppers of the bottles, and meet at top in the brass ball. Thus a communication is made between all the inside coatings of the jars, while their outside coatings are connected by the bottom of the box on which they stand; and which, that it may conduct the better, is covered with tin foil. In one side of the box near the bottom is an hole through which a brass hook passes, and which communicates with the metallic lining of the box, and consequently with the outside coating of the jars. To this hook a wire or chain is occasionally connected when a discharge is made; and for the more convenient making of this discharge, a ball and wire B proceed to a convenient length

from the centre ball A. When the whole force of the battery is not required, one, two, or three jars may be removed only by pressing down the wires belonging to them, until their extremities can slip out of their respective holes in the brass ball, and then turning them into such a posture that they cannot have any communication with the battery. The number of jars represented in this figure is rather small for some purposes; but it is better to join two or three small batteries together rather than have a single large one, which is inconvenient on account of its weight and wifeliness.

(343.) An electrician ought to be expert in constructing batteries, and in coating the vessels self, not only because of the expence attending the employment of others, but because he is often be at too great a distance from work who are accustomed to operations of this kind. A considerable difficulty arises with respect to the size of the jars and the kind of glass they are to be made of. Fine flint or crystal glass may probably be used with greater advantage than any other; but the expence becomes a very considerable object, especially as the jars of a battery are very apt to break by the inequality of their strength for the force of the fluid in a battery is equally distributed among all the bottles, however their capacities may differ. Thus, if we express the quantity of charge which one jar can easily receive by the number 10, we ought not to combine such a jar in a battery with another whose capacity is only 8; because the whole force of electricity expressed by 10 will be directed also against that whose quantity is only 8; so that the latter will be in danger of being broken. It will be proper, therefore, to compare the bottles with one another before putting them together in a battery.

(344.) Besides the consideration of the absolute capacity which each bottle has of receiving a charge, the time which is taken up in charging it must also be attended to; and the jars of a battery ought to be as equal as possible in this respect as well as in the former. The thinner a glass is, the more readily it receives a charge, and *vice versa*; but it doth not follow from thence, as electricians in general imagined till lately, that, on account of its thinness, it is capable of containing a greater charge than a thicker one. The reverse is actually the case: and though a thick glass cannot be charged in such a short time as a thin one, it is nevertheless capable of containing a greater power of electricity. If the thickness of the glass be very great, no charge can indeed be given it; but experiments have not yet determined how great the thickness must be which will prevent any charge. Indeed it is observed, that though a thick glass cannot be charged by a weak electric machine, it may be so by a more powerful one: whence it seems reason able to suppose, that there is no real limit of this kind; but that if machines could be made sufficiently powerful, glasses of any thickness might be charged.

(345.) Mr BROOKE, an ingenious electrician of Norwich, constructed his batteries, which appear to have been very powerful, of green glass bottles. Some of them had only 9 of these bottles; but when

Fig. 1.



Fig. 4.

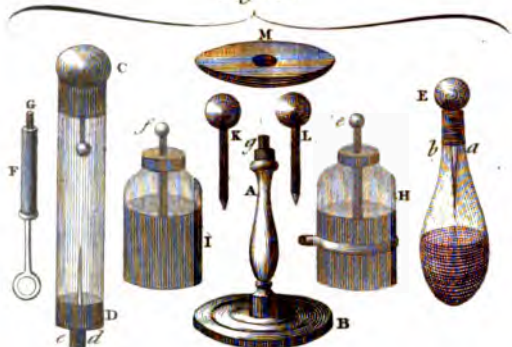


Fig. 9.



Fig. 6.

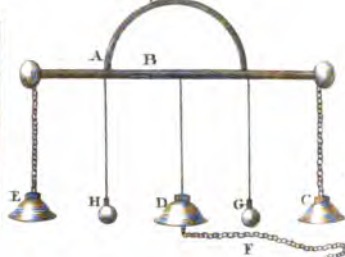


Fig. 2.



Fig. 3.



Fig. 7.



Fig. 8.

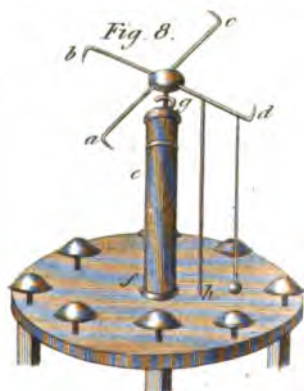


Fig. 12.



Fig. 13.

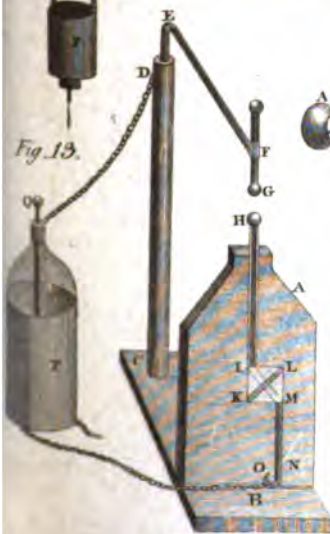


Fig. 10.

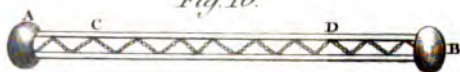


Fig. 15. 16.



Fig. 17.



Fig. 11.





when a greater power was wanted, more were added. Jars would have been preferred to bottles on account of their being more easily coated by reason of their wide mouths; but being less easily procured, he was content to put up with this inconvenience. The mean size of these bottles was about 8 inches in diameter; they were coated 10 inches high, and made of the thickest and strongest glass that could be procured, weighing from 5½ lb. to 7 lb. each. In the construction of a battery of 27 bottles, he disposed of them in 3 rows; 9 of the stoutest and best composing the first row, 9 of the next in strength the second, and the third containing the 9 weakest. All of them were of green glass, but not of the same kind. Some which stood in the foremost row were composed of a kind very like that of which Frontiniac bottles are made; and our author remarks, that this kind of glass seems to be by much the best, as being both harder and stronger, and less liable to break by an high charge. The 2d and 3d rows of the battery consisted of bottles whose diameter was from 6½ to 10 inches, and which were coated from 8½ to 11 inches high; none of their mouths being larger than an inch and an half, nor less than three quarters of an inch. In the case of a bottle being broken by the discharge of the battery, Mr Brooke found that it could be mended in such a manner as to become serviceable for a current made according to the following receipt: "Take of Spanish white 8 oz. heat it very hot in an iron ladle, to evaporate all the moisture; when cool, sift it through a lawn sieve: add ½ oz. of pitch, three quarters of an ounce of rosin, and half an ounce of bees wax: heat them altogether over a gentle fire, stirring the whole frequently for near an hour; then take it off the fire, and continue the stirring till it is cold and fit for use." The bottles cemented with this composition, however, were not thought sufficiently strong to stand in their original place, but were removed to the 2d or 3d row, where they could best sustain the charge. All the bottles of this battery, as well as the single ones he commonly used in his experiments, were coated both on the inside and outside with slips of tin foil from three 8ths to the 4ths of an inch wide, laid on with paste of gum and water, at the distance of about the breadth of a slip between each.

(345.) The INSULATING STOOL, (see Plate XXVII. fig. 8.) is a very useful part of the apparatus, especially for medical purposes, where it is then necessary to insulate the human body. In these cases it is proper to have it of a magnitude sufficient to hold a chair or other seat, on which the patient may sit during the operation. The stool may be conveniently constructed of a mahogany board with glass feet varnished. When used, the insulation will be the more perfect that a piece of paper be put upon it.

(347.) It is often material, to know the state of the jar with respect to the charge; Mr HENRY's quadrant electrometer is the best instrument yet known for that purpose. It consists (fig. 8. Plate CXXVIII.) of a perpendicular stem formed at top like a ball, and furnished at its lower end with a brass ferrule and pin, by which it may be fixed in one of the holes of the conductor, or at the top of

a Leyden bottle. To the upper part of the stem, a graduated ivory semicircle is fixed, about the middle of which is a brass arm or cock, to support the axis of the index. The index consists of a very slender stick, which reaches from the centre of the graduated arch to the brass ferrule; and to its lower extremity is fastened a small pith ball nicely turned in the lathe. When this electrometer is in a perpendicular position, and not electrified, the index hangs parallel to the pillar; but when it is electrified, the index recedes more or less according to the quantity of electricity, from the stem.—Fig. 14, Plate CXXV represents this electrometer separated from its stand, and fixed upon the prime conductor.

(348) Several other kinds of electrometers, as well as various other electrical instruments, will be particularly described along with these experiments, for which they are principally adapted.

SECT. IV. Of the METHOD OF USING the ELECTRICAL APPARATUS.

(349.) Young electricians often find cause to complain that the experiments described in treatises on electricity do not succeed with them, though possessed of very good apparatus for making them. Besides the want of practice, which time and patience can only supply, this is frequently owing to their not attending to some slight and seemingly trifling circumstances; such as dust or moisture about the instruments; some small part of them being out of order; the weather being too hot, or rainy, or the like. The following directions should therefore be particularly attended to by every student of electricity:

(350.) Until he has acquired a very considerable degree of perfection by practice and habit, he should not commence his operations in all kinds of weather. When the weather is clear and the air dry, especially if it be serene and frosty, the electrical machine will always work well. In such weather the young electrician will run no risk of being disappointed. But when the weather is very hot, the machine is not very powerful; nor will it work in damp weather, unless it be brought into a warm room, and the cylinder, stands, jars, discharges, &c. be made perfectly dry.

(351.) Before the electrical machine is put in motion, examine those parts which are liable to wear, either from the friction of one surface against another, or to be injured by the dirt, that may insinuate itself between the rubbing surfaces. If any grating or disagreeable noise is heard, the place from whence it proceeds must be discovered, wiped clean, and rubbed over with a small quantity of tallow; a little of which should also be occasionally applied to the axis of the cylinder itself. The screws by which the frame is fixed should also be examined, and if they are loose, they should be made tight.

(352.) The machine being examined and put in order, the glass cylinder, and the pillars which support the cushion and conductor, should be well wiped with a dry old silk handkerchief, to free them from the moisture which glass attracts from the air; being particularly attentive to leave no moisture on the ends of the cylinder, as any damp on these parts carries off the electric fluid, and lessens

lessens the force of the machine: in very damp weather it will be proper to dry the whole machine, by placing it at some little distance from the fire.

(353.) Particular care should be taken that no dust, loose threads, or filaments, adhere to the cylinder, its frame, the conductors, or their insulating pillars; because these will gradually dissipate the electric fluid, and prevent the machine from acting powerfully. When satisfied of this, rub the glass cylinder first with a clean, coarse, dry, warm cloth, or a piece of wash leather, and then with a piece of dry, warm, soft silk; do the same to all the glass insulating pillars of the machine and apparatus; these pillars must be rubbed more lightly than the cylinder, because, being varnished, they may be damaged by too much friction. In some cases it is proper to place a hot iron on the foot of a conductor, to evaporate the moisture which would otherwise injure the experiments.

(354.) After exciting the electrical machine, greasing the cylinder, and applying Dr Higgins's amalgam, &c. as above described (§ 305 and 306,) proceed to work it by turning the winch or handle. When the prime conductors and other instruments are removed from the machine, it will soon be perceived, upon holding the knuckle of the fore finger near the surface of the cylinder, that the electric fluid comes like a wind from the cylinder to the knuckle, and if the motion be continued, sparks and cracklings will soon follow. This indicates that the machine is in good order, and the electrician may proceed with his experiments. But if no wind be found upon the knuckle, the fault will probably be in the rubbers. To remedy this, loosen the screws on the back of the rubber, remove it from its glass pillar and keep it a little near the fire, that its silk part may be dried; then pass a little tallow from a candle over the leather of the rubber; spread a small quantity of the amalgam over it, and force it into the leather as much as possible: after which, replace the rubber upon the glass pillar, and wipe the cylinder once more, and the machine will be fit for use.

(355.) By turning the handle of the electrical machine, and of course the glass cylinder which moves with it, the electrical fluid is produced; and this we shall find, as before observed, of two kinds, each strongly attractive of the other, though repulsive of a similar kind: when united, the expansive power they before exerted, is condensed, and all electric signs vanish. To prove these positions, insert a wire into the cushion, and another into the conductor; each of these must be furnished with a brass ball at top, and each of them also with a sliding wire with balls on its end, that it may be set at any convenient distance from the other.

(356.) On turning the cylinder, you observe, 1. That you can obtain an electric spark from the balls of either wire on presenting your knuckle thereto. 2. That a strong spark will pass from one ball to the other. 3. That on holding a cork ball suspended by silk, between the two brass balls, it is alternately attracted and repelled from one to the other. 4. Electrify a pair of insulated balls by the cushion, and you will find them to possess

the negative electricity; electrify them by the conductor, and they will possess the positive. 5. Join the balls together, and all electric signs will vanish. On the contrary, if you place both either on the conductor, or the cushion, you will find that no spark will pass between them, the cork ball remains stationary, being neither attracted nor repelled by the balls, and this because they both possess the same kind of electricity.

(357.) On turning the cylinder and separating it from the silk, the electric powers are separated: the cylinder gives its negative power to the cushion in exchange for the positive; the conductor, in like manner exchanges its power with the cushion; for as long as the cushion communicates with the table by a chain, and you continue turning the cylinder, you will find the conductor strongly electrified with the positive electricity. Take the chain from the cushion, and suspend it from the conductor; on turning the cylinder you will find the cushion strongly electrified with negative electricity. Connect the cushion, conductor by a chain, and the electrical signs appear.

(358.) When the cylinder is turned slowly by a small quantity of the fluid is excited, it does not fly far in the form of a spark; but if we turn it somewhat faster, and make the balls adhere to the glass, the quantity of excited electricity is considerably increased. The fluid spark passes through a greater space, and takes a crooked or zig-zag direction, resembling flashes of lightning. The brilliancy of the sparks depends much on the pressure of the atmosphere for the spark which explodes in air is vivid and noisy; but if the same be tried in an exhausted receiver, instead of a spark and explosion, a silent, faint diluted stream is produced.

(359.) On whirling the cylinder in contact with the rubber, without bringing any conducting body near the former, or insulating the latter, we perceive in the dark a stream of fire seemingly issuing from the place of contact between the rubber and cylinder, and adapting itself to the form of the cylinder so as to involve it in a blue flame marked with bright sparks; the whole making a very perceptible whizzing and snapping noise. If the finger is brought near the cylinder in this situation the flame and sparks will leave the cylinder to strike it; and this phenomenon will continue long as the globe is whirled round.

(360.) On applying the prime conductor, the light will in a great measure vanish, and be perceptible only upon the points presented by the cylinder; but if the finger is now brought near the conductor, a very smart spark will strike it, and that at a greater or smaller distance according to the strength of the machine. This spark, if the electricity is not very strong, appears like a straight line of fire; but if the machine acts powerfully, it will assume the appearance of a zig-zag lightning, throwing out other sparks from the corners, and strike with such force as to give considerable pain to those who receive it. These sparks in certain circumstances will set fire to spirits, tinder, gunpowder, &c.

(361.) If instead of the finger or any part of the human body, we hold the knob of a coated plate

between the conductor, a vast number of sparks will appear, first with a loud snapping noise, and then gradually diminishing until at last it ceases, and pencils of blue flame intermixed with small sparks will be thrown out by the phial; and if the phial is still kept near the conductor, it will in a little time discharge itself with a violent flash and crack; after which, if the phial has not been taken by the discharge, the sparks from the conductor will begin as before, and the same phenomenon be repeated as long as the cylinder is turning, or till the phial breaks.

(362.) On applying the battery, though the accumulation of electricity be much greater than in the phial, the signs of it are much less apparent; and sparks will always pass between the conductor and knob leading to the battery, by reason of the great evaporation from the latter in the air. But here, if one of the jars discharges itself, all the rest are likewise discharged in the same moment, and some of them generally broken. (363.) The electricity in all cases will be positive if the rubber be not insulated, and negative if so: and by Mr NAIRNE'S contrivance of joining a conductor connected with the insulated jar, and another with the cylinder, both kinds of electricity may be had with equal ease.

(364.) Sometimes the machine will not work, because the rubber is not sufficiently supplied with electric fluid. This happens when the table on which the machine stands, and with which the chain of the rubber is connected, is in a bad conducting state from being too dry. Even the floor and the walls of the room are, in very dry weather, bad conductors, and cannot supply the rubber sufficiently. In this case, the chain of the rubber must be connected by a long wire with a water, moist ground, or the iron work of a water pump; which will soon supply the rubber with a sufficiency of electric fluid.

(365.) When the heat of the cylinder exceeds 100°, it will not act properly. If the machine does not work well, when a sufficient quantity of gum has been accumulated upon the leather or rubber, then, instead of adding more amalgam, it will be proper to take off the rubber, and scrape a little off that which is already upon the leather. The cylinder, when used for some time, frequently contracts black spots, occasioned by the amalgam or some foulness of the rubber. These spots must be carefully taken off, otherwise they will increase in size, and greatly obstruct the electric power of the cylinder; which, to prevent soiling them, must be often wiped.

(366.) When any experiment is to be performed which requires but a small part of the apparatus, the remaining part of it should be placed at a distance from the machine, the prime conductor, and even from the table, if that is not very large. Candles, particularly, should be placed at a considerable distance from the prime conductor, for the effluvia of their flames carry off much of the electric fluid.

LECT. V. Of CHARGING and DISCHARGING ELECTRIC JARS, and BATTERIES.

(367.) We now proceed to consider the way in which the LEYDEN PHIAL, or a common glass

jar coated, becomes capable of giving a person such a violent sensation, as nothing else in nature can give.

(368.) The phial being placed on the table, so that the ball on the top of its wire may be about one eighth of an inch from the ball of the prime conductor, turn the machine, and sparks will fly from the ball of the conductor to the ball of the jar. Continue turning as long as you perceive the fire pass between the conductor and ball of the jar; but when it ceases, you may leave off turning, and consider the jar as charged. This done, take hold of the discharger by the middle, and apply one knob to the outside coating near the bottom, and keeping it there, put the other to the ball of the jar, and it will be discharged of its fire with a loud snap; but the person who holds the discharger feels nothing from the discharge, because the handle of the discharger does not conduct.

(369.) If you charge the jar again, and touch the outside coating with one hand, and then bring the other to the ball of the jar, you will act the part of the wire discharger, and receive a shock through your arms and breast, and the phial will be discharged. If a single person receive a shock, the company is diverted at his sole expence; but all contribute their share to the entertainment, and all partake of it alike, when the whole company form a circle by joining their hands, the person at one extremity of the circle touching the outside coating, while he, who is at the other extremity, touches the ball of the jar. All the persons who form this circle are struck at the same time, and with the same degree of force.

(370.) If you place a Leyden bottle upon the insulated stand, forming a communication between it and the conductor, and give the machine a few turns, both sides of the bottle will be electrified with the positive electricity, as may easily be proved by touching them with down, or a small ball suspended by silk; for when this is electrified by touching the outside, it will be also repelled by the ball which communicates with the inner surface.

(371.) Having placed an insulated bottle so that the ball may communicate with the conductor; let a wire also be connected with the coating, so as to form a communication with the table. Next turn the machine, and, 1. On applying a cork ball, you will not find any signs of electricity in the coating, but you will find the ball (or inside) electrified with the vitreous power. 2. Remove the wire communicating with the table, and you will find the coating also electrified with the vitreous power; and this as often as you remove the wire, till the bottle is full charged. 3. When the bottle is full charged, remove its communication both with the conductor and table, touch the coating, and the cork ball will remain suspended by it, without any sign of being electrified; then touch the knob of the bottle with your hand, the cork ball will be strongly repelled from the coating, and be electrified with negative electricity. 4. Take another cork ball suspended by silk, and touch the knob of the bottle therewith, and the cork ball will be electrified with positive electricity, and be repelled. 5. Now touch the coating

with your finger, and the cork ball will be repelled much further by the ball; but that which was repelled from the coating, now flies towards it, and remains at rest, till you touch the knob of the bottle with your finger; it will then be electrified as at first, and be violently repelled; the ball which was electrified by the knob of the bottle will now fly towards it. This change takes place almost instantaneously as often as the ball or coating is touched.

(372.) The knob of the bottle may be made to connect with the conductor by a wire, suspending a cork ball so as to touch the conductor; then, on touching the coating, the ball will be repelled from the conductor, while that next the coating is attracted; touch the knob of the bottle, and the ball will be repelled from the coating, and attracted by the conductor, and so on as often as you please.

(373.) In charging electric jars in general, it is to be observed, that every machine will not charge them equally high. Those machines which are strongest will always charge the jars highest. If the coated jars, before they are made use of, be made somewhat warm, they will receive and retain the charge better.

(374.) If several jars be connected together, among which there is one that is apt to discharge itself very soon, then the other jars will also soon be discharged with it, although they may be capable of holding a very great charge by themselves. When electric jars are to be discharged, the electrician must be cautious, lest by some circumstance not adverted to, the shock should pass through any part of his body; for an unexpected shock, though not very strong, may occasion disagreeable accidents. In making the discharge, care must be taken that the discharging rod be not placed on the thinnest part of the glass, as that may cause the breaking of the jar.

(375.) Upon discharging large batteries, jars are often found broken, which burst during the discharge. Mr NAIRNE discovered a very effectual method of remedying this inconvenience, viz. never to discharge the battery through good conductor, unless the circuit be at least 5 feet long. He says, that ever since he made use of this precaution, he has discharged a large battery near 100 times without ever breaking a single jar, whereas before he was continually breaking them. But it must be owned, that the length of the circuit weakens the force of the shock proportionably; the highest degree of which is in many experiments required.

(376.) When a jar, and especially a battery, has been discharged, the electrician ought not to touch its wires with his hand, before the discharging rod be applied to its sides a 2d and even a 3d time; as there generally remains a residuum of the charge, which is sometimes very considerable.

(377.) All the above mentioned phenomena are the more remarkable in proportion to the power of the machine. That used in TEYLER'S MUSEUM is the strongest of which we have yet heard; and its effects are as follow:

(378.) On presenting a very sharp steel point to the prime conductor, a luminous stream of about half an inch was perceived between them. On

fixing the point to the conductor so as to project three inches from it, streams of light were thrown out from the point six inches long when a ball three inches in diameter was presented, but only two inches in length on presenting another point (379.) The sensation, called the *spider's web* on the face of the bystanders is often felt at the distance of 8 feet from the prime conductor. This is a sensation always produced by strong electricity, something resembling the creeping of insects or the motion of a light body, such as a spider web, over the skin. It seems to proceed from attraction and electrification of the small body with which the body is covered. A thread 3 feet long was sensibly attracted at the distance of 30 from the prime conductor, and a point wire appeared luminous at the distance of 23 feet; a cork-ball electrometer diverged at the distance of 40 feet.

(380.) A single spark from the conductor excited a considerable length of gold leaf; gunpowder and other combustibles, inclosed in a paper cartridge, with a sharp point in the middle, were fired; and when another conductor communicating with the earth was placed at the distance of 21, or sometimes 24 inches from the prime conductor of the machine, a stream of fire was perceived between them. This was crooked, darted out many lateral brushes of a very small size. A Leyden phial, containing about one foot of coated surface, was so fully charged, about half a turn of the winch, as to discharge itself: and by repeated trials it was found, that one minute it discharged itself 76, 78, and frequently 80 times. Lastly, it was found, that the conductor, which received the sparks from the prime one of the machine, communicated to the earth by a wire $\frac{1}{4}$ ths of an inch in diameter, this wire would give small sparks to any conducting body brought near it, as if even this wire had not been sufficient to conduct the quantity of electricity it received from the machine very nearly to the earth.

SECT. VI. EXPERIMENTS exhibiting ELECTRIC ATTRACTION and REPUSSION.

(381.) EXP. I. THE ELECTRIFIED CORK-BALL ELECTROMETER. Fix at the end of the prime conductor a knobbed rod, and hang on it two small cork balls suspended by threads of equal length. The balls will now touch one another, the threads hanging perpendicularly, and parallel to each other. But if the cylinder of the machine be whirled turning the winch, then the cork balls will separate one another, more or less according as the electricity is more or less powerful. If the electrometer be hung to a prime conductor negatively electrified, i. e. connected with the insulated rubber of the machine, the cork balls will also repel each other. If, in this state of the repulsion, the prime conductor is touched with some conducting substance not insulated, the cork balls will immediately come together. But if, instead of the conducting substance, the prime conductor is touched with an electric, as a stick of sealing wax, a piece of glass, &c. then the cork balls will continue to repel each other; because the electric fluid cannot be conducted through that electric; hence we have a

ely method of determining what bodies are conductors and what electrics. This electrical repulsion is also shown by a large downy feather, or more agreeably by the representation of a human head with hair, as represented *Pl. CXXVIII.* For there the electric repulsion will make the hair erect itself in a singular manner. If the feather is used, it will appear beautifully swelled by the divergency of its down.

(382.) II. *ATTRACTION and REPULSION of LIGHT BODIES.* Connect with the prime conductor, by the hook H, the two parallel brass plates F, G, *fig. 15. plate CXXV.* and *fig. 2. plate CXXIX.* at about three inches from one another; and upon the lower plate put any kind of light bodies, as bran, bits of paper, bits of leaf gold, &c.; to work the machine, and the light bodies will move between the two plates, leaping alternately from one to the other with great velocity. Instead of bran or irregular pieces of other matter, small figures of men or other things cut of paper and painted, or rather made of the pith of elder, be put upon the plate, they will generally move in an erect position, but will sometimes go one upon another, or exhibit different positions, so as to afford a pleasing spectacle to an evening company. When bran or other substances of that kind are made use of, it will be better to inclose both plates in a glass cylinder, which the bran will be kept from dispersing flying about the room. The phenomena of electric attraction and repulsion may be exhibited with a glass tube, or a charged bottle, and one of them in a manner more satisfactory than in the machine.

(383.) III. *THE FLYING FEATHER, OR SHUTTLE COCK.* Take a glass tube (whether smooth or rough is not material); and after having rubbed it, let a small light feather be let out of your fingers at the distance of about 8 or 9 inches from the tube. This feather will be immediately attracted by the tube, and will stick very close to its surface about 2 or 3 seconds, and sometimes longer; after which it will be repelled; and if the tube is kept under it, the feather will continue floating in the air at a considerable distance from the tube, without coming near it again, except it first touches some conducting substance; and if you charge the tube dexterously, you may drive the feather through the air of a room at pleasure.

(384.) IV. This experiment may be varied as follows: A person may hold in his hand an excited tube of smooth glass, and another may hold an excited rough glass tube, a stick of sealing wax, or any other electric negatively electrified, at about one foot and a half distance from the smooth tube; a feather now may be let go between the two differently excited electrics, and it will fly alternately from one electric to the other; and two persons will seem to drive a shuttlecock from one to the other, by the force of electricity.

(385.) IV. *THE ELECTRIC WELL.* Place upon the electric stool a metal quart mug, or some other conducting body nearly of the same form and dimension; then tie a short cork ball electrometer, at the end of a silk thread proceeding from the ceiling of the room, or from any other support, so that the electrometer may be suspended within the

mug; and no part of it above the mouth: this done, electrify the mug by giving it a spark with an excited electric or otherwise; and you will see that the electrometer, whilst it remains in that insulated situation, even if it be made to touch the sides of the mug, is not attracted by it, nor does it acquire any electricity; but if, whilst it stands suspended within the mug, a conductor, standing out of the mug, be made to communicate with or only presented to it, then the electrometer is immediately attracted by the mug.

(386.) V. *THE ELECTRICAL SPIDER.* *Fig. 3. Pl. CXXIX.* represents an electric jar, having a wire C D E fastened on its outside, which is bended so as to have its knob E as high as the knob A.—B is a spider made of cork, with a few short threads run through it to represent its legs. It is fastened at the end of a silk thread, proceeding from the ceiling of the room, or from any other support, so that it may hang mid way between the two knobs A and E, when the jar is not charged. Let the place of the jar upon the table be marked; then charge the jar, by bringing its knob A in contact with the prime conductor, and replace it in its marked place. The spider will now begin to move from knob to knob, and continue this motion for a considerable time, sometimes for several hours. The inside of the jar being charged positively, the spider is attracted by the knob A, which communicates to it a small quantity of electricity; the spider then becoming possessed of the same electricity with the knob A, is repelled by it, and runs to the knob E, where it discharges its electricity, and is then attracted by the knob A, and so on. Thus the jar is gradually discharged; and when the discharge is nearly completed, the spider finishes its motion.

(386.) VI. *THE ELECTRICAL JACK* is an invention of Dr FRANKLIN'S, and turns with considerable force, so that it may sometimes be used for the purposes of a common jack. A small upright shaft of wood passes at right angles through a thin round board of about 12 inches diameter, and turns on a sharp point of iron fixed in the lower end, while a strong wire in the upper end, passing through a small hole in a thin brass plate, keeps the shaft truly vertical. About 30 radii, of equal length, made of window glass cut into narrow slips, issue horizontally from the circumference of the board, the ends most distant from the centre being about 4 inches apart. On the end of every one a brass thimble is fixed. If now the wire of an electrified bottle be brought near the circumference of this wheel, it will attract the nearest thimble, and so put the wheel in motion. That thimble, in passing by, receives a spark; and thereby being electrified, is repelled, and so driven forwards; while a 2d, being attracted, approaches the wire, receives a spark, and is driven after the first; and so on, till the wheel has gone once round; when the thimbles before electrified approaching the wire, instead of being attracted, as they were at first, are repelled, and the motion presently ceases. But if another bottle which had been charged through the coating, or otherwise negatively electrified, is placed near the same wheel, its wire will attract the thimble repelled by the first, and thereby double the force that car-

ries the wheel round. The wheel therefore moves very swiftly, turning 12 or 15 times in a minute, and with such force, that a large fowl spitted on the upper shaft may be roasted by it.

(387.) VII. The SELF-MOVING WHEEL. This appears more surprising than the last experiment, though constructed upon the same principles. It is made of a thin round plate of window glass 17 inches in diameter, well gilt on both sides, all but two inches next the edge. Two small hemispheres of wood are then fixed with cement to the middle of the upper and under sides, centrally opposite; and in each of them a strong thick wire 8 or 10 inches long, which together make the axis of the wheel. It turns horizontally on a point at the lower end of its axis, which rests on a bit of brass cemented within a glass salt cellar. The upper end of its axis passes through a hole in a thin brass plate, cemented to a long and strong piece of glass; which keeps it 6 or 8 inches distant from any non-electric, and has a small ball of wax or metal on its top to keep in the fire. In a circle on the table which supports the wheel, are fixed 12 small pillars of glass, at about 11 inches distance, with a thimble on the top of each. On the edge of the wheel is a small leaden bullet, communicating by a wire with the gilding of the upper surface of the wheel; and about six inches from it is another bullet communicating in like manner with the under surface. When the wheel is to be charged by the upper surface, a communication must be made from the under surface to the table. As soon as it is well charged, it begins to move. The bullet nearest to a pillar moves towards the thimble on that pillar; and, passing by, electrifies it, and is then repelled from it. The succeeding bullet, which communicates with the other surface of the glass, more strongly attracts that thimble on account of its being electrified before by the other bullet; and thus the wheel increases its motion, till the resistance of the air regulates it. It will go half an hour; and make, one minute with another, 20 turns in a minute, which is 600 turns in the whole; the bullet in the upper surface giving in each turn 12 sparks to the thimbles, making in all 2500 sparks; while the same quantity of fire is thought to be received by the under bullet. The whole space moved over by these bullets in the mean time is 2500 feet. If, instead of two bullets, you put eight, four communicating with the upper, and four with the under surface, the force and swiftness will be greatly increased, and the wheel will make about 50 turns in a minute; but then it will not continue moving so long. These wheels may be applied to the ringing of chimes, and the moving of small oratories, &c.

(388.) VIII. The ELECTRIFIED BELLS. Fig. 6. Plate CXXIX. represents an instrument having three bells, which are made to ring by electric attraction and repulsion. B is a brass rod, furnished with a ring, A, of the same metal, by which it is suspended from another rod fixed in the prime conductor. The outer bells C and E are suspended by brass chains; but the middle bell D and the two small brass clappers G and H are suspended by silk threads. From the concave under part of the bell D a chain proceeds, which falls upon the

table, and has a silk thread F, at its extremity. When this apparatus is hung to the conductor by the ring A, and the cylinder of the machine gently turned, the clappers will fly from bell to bell with a rapid motion, and the bells will ring as long as they are kept electrified. The two bells C and E being suspended by brass chains, are first electrified: hence they attract the clappers, communicate to them a little electricity, and repel them to the unelectrified bell D; upon which the clappers deposit their electricity, and move again to the bells C E, from which they acquire more and so on. If, by holding the silk thread F, the chain of the middle bell be raised from the table, the bells after ringing a little while will stop; because the bell D will have no opportunity of conveying the electricity it receives from the clappers to the ground, being insulated by the silk thread. In the dark, sparks will be seen between the clappers and bells.

(389.) Fig. 7. represents a set of bells more elegantly mounted, and which produce a better sound. In these the knob *a* must communicate with the conductor when the apparatus is made use of. Fig. 8. represents a set of 8 bells otherwise constructed. The clapper *b* is here suspended by a silken thread from the fly *abcd*: the end of the fly rests in a small hole on the top of a pillar; and its upper part moves freely in, and is confined by a hole in the brass arm *g*. To make use of these bells they must be applied to the cylinder of the machine, or at least brought near it when the conductor is removed: for the fly *abcd* may be about the height of the centre of the cylinder. The latter being then put in motion, the electricity from it proceeding to the fly, will cause it to turn round in the manner described in experiment VI. SECT. IX; (§ 439, &c.) and the clapper attracted by each of the bells alternately in its rotation; which, if they are properly tuned, will produce a pleasing and harmonious sound.

(390.) IX. The MAGIC PICTURE. This is a contrivance of Mr KINNESLEY; and is perhaps more calculated to give surprise than any other experiment in electricity. It is made in the following manner: Having a large mezzotint picture of the king, with a frame and glass, (fig. 9. Plate CXXIX.) take out the print, and cut a pane of it near two inches distant from the margin all round. If the cut be through the picture, it is nothing the worse. With thin paste, or gum water, fix the board that is cut off on the inside of the glass, pressing it smooth and close; then fill up the vacancy, by gilding the glass well with gold or brass leaf. Gild likewise the inner edge of the back of the frame all round, except the top part, and form a communication between the gilding and the gilding behind the glass; and then put in the board, and that side is finished. Turn up the glass, and gild the fore side exactly of the back gilding; and when dry, cover it with a paste of the back of the picture that has been cut out; observing to bring the corresponding parts of the board and picture exactly together, by which the picture will appear one piece at first; only part is behind the glass and part is before. Lastly, hold the picture horizontally by the

top, and place a little moveable gilt crown on the king's head. If now the picture is moderately electrified, and another person take hold of the same with one hand, so that his fingers touch its inside gilding, and with the other endeavour to take off the crown, he will receive a terrible blow, and fail in the attempt. The operator, who holds the picture by the upper end, where the inside of the frame is not gilt, to prevent its falling, feels nothing of the shock; and may touch the face of the picture without danger, which he pretends to be a test of his loyalty.

SECT. VII. EXPERIMENTS exhibiting ELECTRIC LIGHT and FIRE.

(391.) The following experiments require to be made in the dark: for although the electric light in several circumstances may be seen in the daylight, yet its appearance in this manner is very confused; and that the electrician may form a better idea of its different appearances, it is absolutely necessary to perform such experiments in a darkened room.

(392.) I. The STAR and PENCIL OF ELECTRIC LIGHT. When the electrical machine is in good order, and the prime conductor is situated with the collector sufficiently near the glass cylinder, and the winch, and you will see a lucid star at each of the points of the collector. This star is the constant appearance of the electric fluid that is entering a point. At the same time you will see a strong light proceeding from the rubber, and spreading itself over the surface of the cylinder; and if the excitation of the cylinder is very powerful, dense streams of fire will proceed from the rubber, and, darting round almost half the circumference of the cylinder, will reach the points of the collector. If the prime conductor is removed, the dense streams of fire will go quite round the cylinder; reaching from one side of the rubber to the other. If the chain of the rubber be taken off, and a pointed body, for instance the point of a needle or a pin, be presented to the back of the rubber, at the distance of about two inches, a lucid pencil of rays will appear to proceed from the point presented, and diverge towards the rubber. If another pointed body be presented to the prime conductor, it will appear illuminated with a star; but if a pointed wire or other pointed conducting body be connected with the prime conductor, it will throw out a pencil of rays.

(393.) II. DRAWING SPARKS. Let the prime conductor be situated in its proper place, and electrify it by working the machine; then bring a metallic rod with a round knob at each end, or a knuckle of a finger, within a proper distance of the prime conductor, and a spark will be seen between that and the knuckle or knobbed wire. The longer and stronger spark is drawn from that end of the prime conductor which is farthest from the cylinder, or rather from the extremity of the knobbed rod fixed at its end. This spark appears like a long line of fire, reaching from the conductor to the opposed body, and often (particularly when the spark is long, and different conducting substances are near the line of its direction) it will have the appearance of being bended to sharp

angles in different places, resembling a flash of lightning. It often darts brushes of light sideways in every direction.

(394.) III. The ARTIFICIAL LIGHTNING. Let two persons, one standing upon an insulated stool, and communicating with the prime conductor, and another standing upon the floor, each hold in one of his hands a metal plate, so that the plates may stand back to back in a parallel situation, and about two inches asunder. Let the winch of the machine be turned, and the flashes of light between the two plates will appear so dense and frequent, that one may easily distinguish any thing in the room. By this experiment the electric light is exhibited in a very copious and beautiful manner, and bears a striking resemblance to lightning.

(395.) IV. To FIRE INFLAMMABLE SPIRITS. The power of the electric spark to set fire to inflammable spirits, may be exhibited easily thus: Hang to the prime conductor a short rod having a small knob at its end; then pour some spirits of wine, a little warmed, into a spoon of metal; hold the spoon by the handle, and place it in such a manner, that the small knob on the rod may be about one inch above the surface of the spirits. In this situation, if, by turning the winch, a spark be made to come from the knob, it will set the spirits on fire. It will generally be found more advantageous to fix the dish containing the spirits upon the prime conductor, as represented *fig. 10. Plate CXXVIII.* This experiment may be varied different ways, and may be rendered very agreeable to a company of spectators. A person standing upon an electric stool, and communicating with the prime conductor, may hold the spoon with the spirits in his hand, and another person, standing upon the floor, may set the spirits on fire by bringing his finger within a small distance of it. Instead of his finger, he may fire the spirits with a piece of ice, when the experiment will seem much more surprising. If the spoon is held by the person standing upon the floor, and the insulated person brings some conducting substance over the surface of the spirits, the experiment succeeds as well.

(396.) V. The ILLUMINATED BOLOGNIAN STONE. The most curious experiment to show the penetrability of the electric light, is made with the real, or more easily with the artificial, Bolognian stone, invented by the late Mr J. Canton. This phosphorus is a calcareous substance, generally used in the form of a powder, which has the property of absorbing light when exposed to it, and afterwards appearing lucid when brought into the dark. Take some of this powder, and, by means of spirits of wine or ether, stick it all over the inside of a clear glass phial, and stop it with a glass stopper, or a cork and sealing wax. If kept in a room perfectly darkened, it will give no light; but let 2 or 3 sparks be drawn from the prime conductor, when the phial is kept at about two inches from the sparks, so that it may be exposed to that light, and this phial will receive that light, and afterwards will appear illuminated for a considerable time. The powder may be stuck upon a board by the white of an egg, so as to represent figures of planets, letters, or any thing else; and

this may be illuminated in the dark, in the same manner as the phial. A beautiful method to express geometrical figures with the above phosphorus, is to bend small glass tubes of about the tenth part of an inch diameter, in the shape and figure desired, and then fill them with the phosphoric powder. These may be illuminated in the manner described, and they are not so subject to be spoiled as the figures represented upon the board frequently are. The best method of illuminating this phosphorus, and which Mr W. Canton generally used, is to discharge a small electric jar near it.

(397.) VI. *THE LUMINOUS CONDUCTOR.* Fig. 9. *Plate CXXVII.* represents a prime conductor invented by Mr Henly, which shows clearly the direction of the electric fluid passing through it, from whence it is called the *luminous conductor*. The middle part E F of this conductor is a glass tube about 18 inches long and three or four inches in diameter. To both ends of this tube the hollow brass pieces F D, B E, are cemented air-tight, one of which has a point C, by which it receives the electric fluid, when set near the excited cylinder of the electrical machine, and the other has a knobbed wire G, from which a strong spark may be drawn; and from each of the pieces F D, B E, a knobbed wire proceeds within the cavity of the glass tube. The brass piece F D, or B E, is composed of two parts; i. e. a cap F cemented to the glass tube, and having a hole with a valve, by which the cavity of the glass tube is exhausted of air; and the ball D, which is screwed upon the cap F. The supporters of this instrument are two glass pillars fastened in the bottom board H, like the supporters of the prime conductor. When the glass tube of this conductor is exhausted of air by an air-pump, and the brass ball is screwed on, as represented in the figure, then it is fit for use, and may serve for a prime conductor to an electrical machine. If the point C of this conductor is set near the excited cylinder of the machine, it will appear illuminated with a star; at the same time the glass tube will appear all illuminated with a weak light; but from the knobbed wire that proceeds within the glass tube from the piece F D, a lucid pencil will issue out, and the opposite knob will appear illuminated with a star, which, as well as the pencil of rays, is very clear, and discernible among the other light that occupies the greatest part of the cavity of the tube. If the point C, instead of being presented to the cylinder, be connected with the rubber of the machine, the appearance of light within the tube will be reversed; the knob which communicates with the piece F D appearing illuminated with a star, and the opposite one with a pencil of rays; because in this case the direction of the electric fluid is just the contrary of what it was before; it then going from D to B, and now coming from B and going to D. If the wires within the tube E F, instead of being furnished with knobs, be pointed, the appearance of light is the same; but it seems not so strong in this as in the other case.

(398.) VII. *THE CONDUCTING GLASS TUBE.* Take a glass tube of about two inches diameter, and about two feet long; fix to one of its ends a brass cap, and to the other a stop-cock or valve; then exhaust it of air by an air-pump. If this

tube be held by one end, and its other end be brought near the electrified prime conductor, it will appear to be full of light whenever a spark is taken by it from the prime conductor, and much more so if an electric jar be discharged through it. This experiment may also be made with the receiver of an air-pump. Take a tall receiver, clean and dry, and through a hole at its top insert a wire, which must be cemented air-tight. The end of the wire within the tube must be pointed, but not very sharp; and the other end must be furnished with a knob. Put this receiver upon the plate of the air-pump, and exhaust it. If now the knob of the wire at the top of the receiver be touched with the prime conductor, every spark will pass through the receiver in a dense and large body of light, from the wire to the plate of the air pump. When the air-pump, or any thing not very portable, is to be touched with the prime conductor, the communication between them may be made by means of a rod furnished with an electric handle.

(399.) VIII. *THE ARTIFICIAL AURORA BOREALIS.* Take a phial nearly of the shape and size of a Florence flask; (*fig. 16, Plate CXXV.*) fix a stop-cock or a valve to its neck, and exhaust it of air as much as possible with a good air pump. If this glass is rubbed in the common manner used to excite electrics, it will appear luminous within, being full of a flashing light, which plainly resembles the aurora borealis or northern light. The phial may also be made luminous, by holding it by either end, and bringing the other end to the prime conductor; in this case, all the cavity of the glass will instantly appear full of flashing lights, which remains in it for a considerable time after it has been removed from the prime conductor. Instead of the glass phial a glass tube exhausted of air and hermetically sealed may be used, and perhaps with more advantage. The most remarkable circumstance of this experiment is, that if the phial, or tube, after it has been removed from the prime conductor (and even several hours after the flashing light has ceased to appear), be grasped with the hand, strong flashes of light will immediately appear within the glass, which often reach from one end of it to the other.

(400.) IX. *THE VISIBLE ELECTRIC ATMOSPHERE,* is an experiment of Signior BECCARIA, *G. I. fig. 3, Plate CXXIX.* represents the receiver with the plate of an air-pump. In the middle of the plate I F, a short rod is fixed, having at its top a metal ball B nicely polished, whose diameter is nearly two inches. From the top of the receiver, another rod A D, with a like ball A, proceeds, and is cemented air tight in the neck C; the distance of the balls from one another being about 4 inches, or rather more. If, when the receiver is exhausted of air, the ball A be electrified positively, by touching the top D of the rod A D with the prime conductor, or an excited glass tube, a lucid atmosphere appears about it, which although it consists of a feeble light, is yet very conspicuous, and very well defined; at the same time, the ball B has not the least light. This atmosphere does not exist all round the ball A; but reaches from about the middle of it, to a small distance beyond that side of its surface which is



Fig. 1.

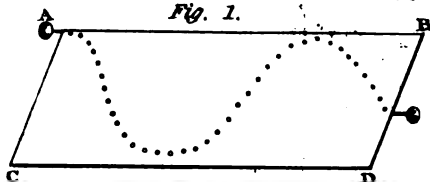


Fig. 9.



Fig. 2.



Fig. 3.

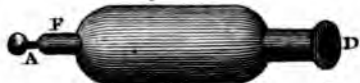


Fig. 4.



Fig. 5.

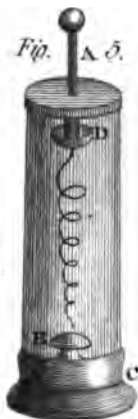


Fig. 6.

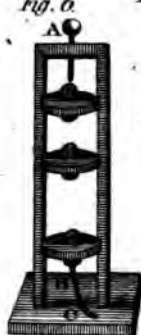


Fig. 8.



Fig. 7.



Fig. 15.

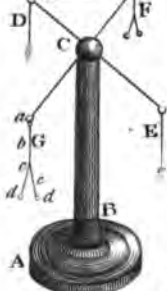


Fig. 11.



Fig. 14.



Fig. 18.



Fig. 17.



Fig. 21.

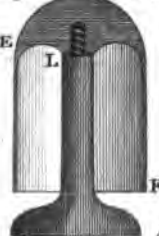


Fig. 20.



Fig. 22.



Fig. 10.



Fig. 12.

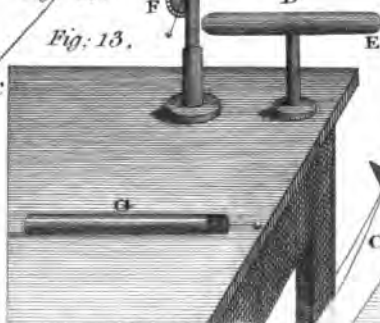


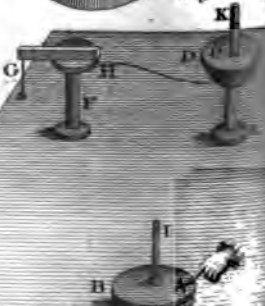
Fig. 13.



Fig. 23.



Fig. 24.



Exp. by J. Newton at the Electrostatic Parthenon.

at the opposite ball B. If the rod with the ball A be electrified negatively, then a lucid atmosphere, like the above described, will appear upon the ball B, reaching from its middle to a small distance beyond that side of it that is towards the ball A; at the same time, the negatively electrified ball A remains without any light. The operator in this experiment must take care not to electrify the ball A too much; else the electric fluid will pass in a spark from the one ball to the other, and the experiment will fail.

(401.) "By this elegant experiment of the celebrated F. B. CCARIA, says Mr Cavallo, we have a singular demonstration of the theory of a SINGLE ELECTRIC FLUID. We see that electricity consists of one uniform homogeneous fluid, and not of two, the vitreous and resinous, as some have supposed; for, if the positive and negative electric were two distinct fluids, attractive of one another, there should in the above experiment always appear two atmospheres, *i. e.* one about the ball A, and another about the ball B; for when the ball A is overcharged with either fluid, it would show that superfluous fluid on its surface, and this fluid should attract towards the ball A an atmosphere of the contrary fluid from the ball B. But this is not the case, for the lucid atmosphere always on one ball, namely, that which is overcharged with the electric fluid: thus when the ball A is electrified positively, the superfluous fluid collects on that part of it which is nearest to the ball B, because B, being in a contrary state of electricity, endeavours to attract it; but when the ball A is electrified negatively, it will attract the fluid proper to the ball B, which fluid on that account appears on the surface of B, just in the act of passing to the ball A."

(402.) Mr CAVALLO adds, "in order to remove an error adopted by several writers on electricity, that the electric light has all the PRISMATIC COLOURS, as well as the light of the sun, it may be easily observed by viewing an electric spark through a glass prism:" and we may see that it affords a strong confirmation of Mr Tytton's theory of the identity of the electric and igneous light. See SECT. II. and III. PART II.

(403.) X. *The SPIRAL TUBES.* Fig. 10. Plate CXXX, represents an instrument composed of several glass tubes C D, one with another, and closed with two knobbed brass caps A and B. The innermost of these has a spiral row of small round pieces of tin foil stuck upon its outside surface, and lying at about one 30th of an inch from each other. If this instrument be held by one of its extremities, and its other extremity be presented to the prime conductor, every spark it receives from the prime conductor will cause small sparks to appear between all the round pieces of tin foil stuck upon the innermost tube; which in the dark affords a pleasing spectacle, the instrument appearing to be compassed by a spiral line of fire.

(404.) FIG. 11. represents several spiral tubes placed round a board, in the middle of which is screwed a glass pillar, and on the top of this pillar is cemented a brass cap with a fine steel point. At this a brass wire turns, having a brass ball at each end, nicely balanced on the wire. To make use of this apparatus, place the middle of the

turning wire under a ball proceeding from the conductor, so that it may receive a succession of sparks from the ball; then push the wire gently round; and the balls in their relative motions will give a spark to each tube, and thereby illuminate them down to the board, which from its brilliancy and rapid motion affords a most beautiful and pleasing sight.

(405.) The small pieces of tin foil are sometimes stuck on a flat piece of glass A B C D, fig. 1. Plate CXXX, so as to represent various fanciful figures. Upon the same principle is the luminous word LIGHT produced. It is formed by the small separations of the tin foil pasted on a piece of glass fixed in a frame of baked wood, as represented fig. 2. To use this, the frame must be held in the hand, and the ball G presented to the conductor. The spark then will be exhibited in the intervals composing the word; from whence it passes to the hook at *b*, and thence to the ground by a chain. The brilliancy of this is equal to that of the spirals.

(406.) XI. *The ELECTRIFIED CAPILLARY SYMPHON.* Let a small bucket of metal filled with water be suspended from the prime conductor, and put in a glass syphon so narrow in the extremity that the water may just drop from it. If in this disposition of the apparatus the winch of the machine be turned, the water, which when not electrified runs out only by drops, will now run in a full stream, or even be subdivided into smaller streams; and if the experiment be made in the dark, the appearance will be very beautiful. The same phenomena will be exhibited by a small bucket with a jet, as represented fig. 12. Plate CXXXIX; or the experiment may be agreeably varied, by hanging one bucket from a positive conductor, and another from a negative one; so that the ends of the tubes or jets may be about three or four inches from each other. The stream issuing from the one will be attracted by that issuing from the other, and both will unite into one; but though both are luminous in the dark before meeting, the united stream will not be so unless the one electricity has been stronger than the other.

(407.) XII. *To FIRE a PISTOL or CANNON by INFLAMMABLE AIR.* Fig. 3. Plate CXXX, represents a brass pistol for inflammable air. It consists principally of a chamber, to the mouth D of which a cork is fitted: a glass tube F is cemented into the top of the chamber, through which a brass wire passes, and is bent within side so as to approach within an 8th part of an inch of the side. On the outside end of this wire is screwed a brass ball A, which serves to receive a spark from the conductor of the machine, and conduct it in that form to the inside of the pistol. The inflammable air with which the pistol is to be charged may be made in a common stone-ware or glass bottle, by mixing a handful of iron filings with about two wine glassfuls of water and near one of oil of vitriol. The air, when thus made, should be kept in a bottle corked up. To use the pistol, take out the cork from the bottle, and instantly apply the mouth of the pistol to the mouth of the bottle; and in about ten seconds it will be sufficiently charged; then remove it, and cork both the pistol and bottle with the utmost expedition: then bring

the ball A near the prime conductor or the knob of a charged jar; and the spark that passes through the ball, and between the end of the wire within the side of the chamber, will fire the inflammable air with a loud report, and drive the cork to a considerable distance. Instruments to fire inflammable air are often made in the form of a cannon with its carriage, as in *fig. 4*.

(408.) XIII. *To FIRE A PIECE OF IRON WIRE IN DEPHLOGISTICATED AIR.* The apparatus for this is represented *fig. 5, Plate CXXX*, where the wire is twisted into a spiral figure. When this is done, it may easily be inserted in the brass knob D. The jar comes out of the bottom C, and is filled with the dephlogisticated air. See *AEROLGY, Index*. The electricity of a common jar being then instantly sent down through the ball and wire at A, an explosion takes place betwixt the end of the small wire and the lower ball B, which set the end of the former on fire. It burns with remarkable brightness; and by reason of the spiral shape into which it is twisted, shows the appearance of a small sun moving from the top to the bottom of the jar, and slowly moving round as the wire, which is of a spiral shape, gradually burns away.

(409.) XIV. *To ILLUMINATE EGGS.* *Fig. 6, Plate CXXX*, represents a mahogany stand so constructed as to hold three eggs at a greater or smaller distance, according to the position of the sliding pieces. A chain C is placed at the bottom in such a manner as to touch the bottom of the egg at B with one end, and with its other the outside coating of a charged jar. The sliding wire A at top is made to touch the upper egg; and the distance of the eggs asunder should not exceed the quarter or eighth part of an inch. The electricity being by means of the discharging rod sent down the ball and wire at A, will in a darkened room render the eggs very luminous and transparent.

(410.) XV. *To ILLUMINATE IVORY or BOXWOOD.* Place an ivory ball on the prime conductor of the machine, and take a strong spark, or send the charge of a Leyden bottle through its centre, the ball will appear perfectly luminous; but if the charge be not taken through the centre, it will pass over the surface of the ball and corrode it. A spark taken through a ball of boxwood not only illuminates the whole, but makes it appear of a beautiful crimson or rather fine scarlet colour.

(411.) XVI. *To ILLUMINATE WATER.* Connect one end of a chain with the outside of a charged jar, and let the other lie upon the table. Place the end of another piece of chain at about one quarter of an inch from the former; then set a decanter of water on these separated ends; and on making a discharge, the water will appear perfectly and beautifully luminous.

(412.) XVII. *To IMITATE A FALLING STAR in vacuo.* *Fig. 7, Plate CXXX*, represents a glass barometer tube, having on the end *b* a steel cap fastened to the glass with cement. From this proceed a wire and ball *c d*. Fill this tube with quicksilver; and then by sending up a large bubble of air, and repeatedly inverting the tube, free the quicksilver and iron ball from air: then put a small

drop of ether on the quicksilver, put the finger at the end of the glass tube: and invert the end of a basin of quicksilver, taking care not to remove the finger from the end of the tube till the latter be immersed under the surface of the quicksilver. When the finger is removed, the mercury will descend, and the ether expand itself; present the metallic top of the tube to a large charged conductor, and a beautiful green spark will pass through the vapour of the ether from the basin to the quicksilver. By admitting a small quantity of air into the tube, an appearance like a falling star is produced.

(413.) XVIII. *To RENDER GOLD LEAF, DUTCH METAL, LUMINOUS.* This is done by discharging the contents of a small Leyden jar at it. A strip of gold leaf one 8th of an inch broad and a yard long, will often be illuminated throughout its whole extent, by the explosion of a containing two gallons. This experiment may be beautifully diversified, by laying the gold or leaf on a piece of glass, and placing the glass in water; for the whole gold leaf will appear brilliantly luminous in the water, by exposing thus circumstanced to the explosion of a battery.

(414.) XIX. *The INFLAMMABLE AIR LE.* *Fig. 8, Plate CXXX*, represents this machine, which is an invention of M. Volta. A is a globe to contain the inflammable air; B, a basin or reservoir to hold water; D, a communication occasionally a communication between the reservoir of water and that of air. The wire passes into the latter through the metal pipe which is fixed to the upper part of the globe A; as *s* is a small cock to cut off or open communication with the air in the ball and the pipe N is a small pipe to hold a piece of wax or tallow L, a brass pillar, on the top of which is a ball of the same metal; *a* is a pillar of glass with a ball at top, in which the wire *b* slides, having a screw on the end of it. F is a cock by which the ball A is filled with inflammable air, which afterwards serves to confine the air, and what water falls from the basin B into the ball.

(415.) After having filled the reservoir A with pure inflammable air and the basin with water, turn the cocks D and *s*, and the water which flows from the basin B will force out some of the inflammable air, and cause it to pass through the jet K into the air. If an electric spark be made pass from the brass ball *m* to that marked *n*, the inflammable jet which passes through the pipe will be fired. To extinguish the lamp, first turn the cock *s*, and then the cock D. The inflammable air is made of the usual ingredients, iron filings and vitriolic acid; and the reservoir is filled in the following manner: Having previously filled A with water, place the foot R in a tube that fluid which may cover it, so that the air passes through which the air passes may be commodiously below the foot of the lamp. When the air has nearly driven out all the water, turn the cock F, and the apparatus is ready for use. This instrument is convenient for preserving a quantity of inflammable air ready for any experimental experiment, as charging the inflammable pistol, &c. It is also convenient for lighting

able for economical purposes, as the least spark from an electrophorus or a small bottle is sufficient to fire the air.

SECT. VIII. EXPERIMENTS with the LEYDEN PHIAL.

(416.) Having in SECT. V. described the method of charging and discharging electrical jars, we shall say before the reader a number of experiments performed with these instruments by the most eminent electricians.

(417.) I. The LEYDEN VACUUM is an invention of the late Mr HENLY. *Fig. 17 & 18, Pl. CXXV.* Present two small phials coated on the outside, but 3 inches up the sides, with tin foil; at the top of the neck of each, a brass cap is cemented, having a hole with a valve, and from the cap a tube proceeds a few inches within the phial, terminating in a blunt point. When this phial is exhausted of air, a brass ball is screwed upon the cap, which is cemented into its neck, so as to close the valve, and prevent any air from getting into the exhausted glass. This phial exhibits the direction of the electric fluid, both in charging and discharging; for if it be held by its stem, and its brass knob be presented to the prime conductor positively electrified, it will be seen that the electric fluid causes the pencil of rays to proceed from the wire within the phial, as represented *fig. 17*; and if it is discharged, a star will appear in the place of the pencil, as represented *fig. 18*. But if the phial is held by the brass cap, and its bottom be touched with the prime conductor, then the point of the wire on its inside will appear illuminated with a star when charging, and with a pencil when discharging. If it be presented to a prime conductor electrified negatively, these appearances, both in charging and discharging, will be reversed.

(418.) The APPARATUS represented *fig. 4, Pl. CXXIX.* will be found very convenient for the various experiments upon the luminous conductor. The Leyden vacuum, jars charged positively or negatively, with their different states of insulation. A non-insulating pillar of glass, which is screwed into the wooden foot B; and on this pillar all the apparatus may be screwed alternately. CD is an exhausted tube of glass, furnished at each end with a cap; at the end D is a valve properly secured under the brass plate; a brass wire with a ball is sent from the upper cap; a pointed wire projects from the bottom plate; and this tube is called the LUMINOUS CONDUCTOR. The flask represented at E is called the LEYDEN VACUUM. It is furnished with a valve under the ball E; to the point at which the more readily, the ball may be screwed: a wire, with a blunt end, projects to within a little of the bottom of the flask, the latter being coated with tin foil; and a female screw is cemented to the bottom, to screw it on the pillar A.—F is a syringe to exhaust the air occasionally, either from the luminous conductor or the Leyden vacuum. To do this, unscrew the ball of the Leyden vacuum, or the plate of the luminous conductor, and then screw the syringe in the place of either of these pieces, being careful that the bottom of the female screw G bears close against the leather which covers the shoulders *ab* or *cd*;

then work the syringe, and in a few minutes the glasses will be sufficiently exhausted. H and I are two Leyden bottles; each of which has a female screw fitted to the bottom, that they may be conveniently screwed on the pillar A; and the bottle H is furnished with a belt by which it may be screwed sidewise to the same. K and L are two small wires, to be screwed occasionally either into the ball E, the knobs *e* or *f*, the cap *c*, or the socket *g* on the top of the pillar: the balls may be unscrewed from these wires, which will then exhibit a blunt point. M is a wooden table to be screwed occasionally on the glass pillar.

(419.) II. To PIERCE VARIOUS SUBSTANCES with the ELECTRIC EXPLOSION. Take a card, a quire of paper, or the cover of a book, and keep it close to the outside coating of a charged jar; put one knob of the discharging rod upon the card, quire of paper, &c. so that between the knob and coating of the jar the thickness of that card, or quire of paper, only is interposed; lastly, by bringing the other knob of the discharging rod near the knob of the jar, make the discharge, and the electric matter will pierce a hole (or perhaps several) quite through the card or quire of paper. This hole has a bur raised on each side, except the card, &c. be pressed hard between the discharging rod and the jar; which shows that the hole is not made in the direction of the passage of the fluid, but in every direction from the centre of the resisting body.

(420.) If this experiment be made with two cards instead of one, which however must be kept very little distant from one another, each of the cards, after the explosion, will be found pierced with one or more holes, and each hole will have burrs on both surfaces of each card. The hole, or holes, are larger or smaller, according as the card, &c. is more damp or more dry. It is remarkable, that if the nostrils are presented to it, they will be affected with a sulphureous, or rather a phosphoreal, smell, just like that produced by an excited electric. If, instead of paper, a very thin plate of glass, rosin, sealing wax, or the like, be interposed between the knob of the discharging rod and the outside coating of the jar, on making the discharge, this will be broken in several pieces.

(421.) Small insects may also be killed in this manner. They may be held between the outside coating of the jar and the knob of the discharging rod, like the above card; and a shock of a common phial sent through them, will instantly deprive them of life, if they are pretty small: but if larger, they will be affected in such a manner, as to appear quite dead on first receiving the stroke; but will, after some time, recover: this, however, depends on the quantity of the charge sent through them.

(422.) Mr Cavallo says, that "if a shock is sent through a lump of SUGAR, strong enough to break it, the shock will ILLUMINATE every piece of it, so as to afford a beautiful experiment in the dark. The sugar will give light for about a minute afterwards."

(423.) III. EFFECT of the SHOCK sent OVER the SURFACE of a CARD or GLASS. Put the extremities of two wires upon the surface of a card, or other body of an electric nature, so that they may

be in one direction, and about one inch distant from one another; then, by connecting one of the wires with the outside of a charged jar, and the other wire with the knob of the jar, the shock will be made to pass over the card or other body. If the card be made very dry, the lucid track between the wires will be visible upon the card for a considerable time after the explosion. If a piece of common writing paper be used instead of the card, it will be torn by the explosion into very small bits.

(424.) If the explosion be sent over the surface of a piece of glass, it will be marked with an indelible track, which generally reaches from the extremity of one of the wires to the extremity of the other. In this manner, the piece of glass is very seldom broken by the explosion. But Mr HENLY discovered a very ingenious method to increase the effect of the explosion upon the glass, by pressing with weights that part of the glass which lies between the two wires, *i. e.* the part over which the shock is to pass. He put a thick piece of ivory upon the glass, and placed upon it a weight, from one quarter of an ounce to 6 lb. The glass in this manner is generally broken by the explosion into innumerable fragments, and some of it is absolutely reduced into an impalpable powder. If the glass be very thick, and resist the force of the explosion, so as not to be broken, it will be marked with the most lively prismatic colours, which are thought to be occasioned by very thin laminæ of the glass, partly separated from it by the shock. The weight laid upon the glass is always shaken by the explosion, and sometimes it is thrown quite off from the ivory. This experiment may be most conveniently made with the universal discharger, *fig. 5, Plate CXXXVIII.*

(425.) In this experiment, Mr Cavallo says, "if small representations of houses, &c. be laid upon a board, placed on the piece of ivory, that, being shook by the explosion, will give a very natural idea of an earthquake."

(426.) IV. *To SWELL CLAY, and BREAK SMALL TUBES, by the ELECTRIC EXPLOSION.* This is an invention of Mr LANE, F. R. S. Roll up a piece of soft pipe clay in a small cylinder, and insert in it two wires, so that their ends without the clay may be about a fifth part of an inch from one another. If a shock be sent through this clay, by connecting one of the wires with the outside of a charged jar, and the other with the inside, it will be inflated by the shock, *i. e.* by the spark, that passes between the two wires, and after the explosion, will appear swelled in the middle. If the shock sent through it is too strong, and the clay not very moist, it will be broken by the explosion, and its fragments scattered in every direction. To make this experiment with a little variation, take a piece of the tube of a tobacco pipe, about one inch long, and fill its bore with moist clay; then insert in it two wires, as in the above rolled clay; and send a shock through it. This tube will not fail to burst by the force of the explosion, and its fragments will be scattered about to a great distance. If, instead of clay, the above mentioned tube of the tobacco pipe, or a glass tube (which will answer as well,) be filled with any other substance, either electric or non-electric, inferior to

metal, on making the discharge, it will be broken in pieces with nearly the same force.

(427.) V. *To make the ELECTRIC SPARK visible in WATER.* Fill a glass tube of about half an inch diameter, and six inches long, with water; and to each extremity of the tube adapt a cork, which may confine the water; through each cork insert a blunt wire, so that the extremities of the wires within the tube may be very near one another; lastly, connect one of these wires with the coat of a small charged phial, and touch the wire of the knob of it; by which means the shock will pass through the wires, and cause a vivid spark to appear between their extremities within the tube. In performing this experiment, care must be taken that the charge be exceedingly weak, otherwise the tube will burst. If we place in a common drinking glass, almost full of water, two knob wires, so bent, that their knobs may be with little distance of one another in the water, and one of these wires be connected with the outside coating of a pretty large jar, and the other wire be touched with the knob of it; the explosion, which must pass through the water from the knob of one of the wires to that of the other, will perforce the water, and break the glass with a surprising violence. This experiment is very dangerous if not conducted with great caution.

(428.) VI. *To FIRE GUN-POWDER.* Make a cartridge of paper, and fill it with gun-powder, or else fill the tube of a quill with it; insert two wires, one at each extremity, so that their ends within the quill, or cartridge, may be about a fifth of an inch from one another: this done, send the charge of a phial through the wires; and a spark between their extremities, that are within the cartridge, or quill, will set fire to the powder. If the gun-powder be mixed with filings, it will take fire more readily, and with a very small shock.

(429.) VII. *To STRIKE METALS into GLASS.* Take two slips of common window glass about six inches long, and half an inch wide; put a thin slip of gold, silver, or brass leaf, between the two, and tie them together, or press them between the boards of the press H, belonging to the universal discharger, *fig. 5, Plate CXXXVIII.*, leaving a small space of the metallic leaf out between the glasses at each end; then send a shock through this metallic leaf, and the force of the explosion will drive the metal into so close a contact with the glass, that it cannot be wiped off, or even be affected by the common menstrua which otherwise would dissolve it. In this experiment the glasses are often shattered to pieces; but whether they are broken or not, the indelible metallic tinge will always be found in several places, and sometimes through the whole length of both glasses.

(430.) VIII. *To STAIN PAPER or GLASS.* Take a chain, which forms a part of the circuit between the two sides of a charged jar, upon a sheet of white paper; and if a shock be sent through the paper, it will be found stained with a black tinge at the very juncture of the links. If the charge be very large, the paper, instead of being stained with spots, will be burnt through. If the chain be laid upon a pane of glass instead of paper, the glass will often be found stained with spots.

several places, but not so deep as the paper. If this experiment be made in the dark, a spark will be seen at every juncture of the links; and if the links are small, and the shock pretty strong, the chain will appear illuminated like a line of fire.

(431.) IX. *The Lateral Explosion.* If a jar be discharged with a discharging rod that has no electric handle, the hand that holds it, in making the discharge, feels some kind of shock, especially when the charge is considerable. In other words, a person, or any conducting substance, that is connected with one side of a jar, but forms no part of the circuit, will feel a kind of shock, *i. e.* the effect of the discharge. This may be rendered visible in the following manner. Connect the outside of a charged jar a piece of chain; discharge the jar through another circuit, as for instance with a discharging rod in the common way, and the chain that communicates with the inside of the jar, and which makes no part of the circuit, will appear lucid in the dark, *i. e.* sparks will appear between the links; which shows, that the electric fluid, natural to that chain, must have been disturbed. This chain will also appear luminous, if it is not in contact with the outside of the jar, but only very near it; and on making the discharge, a spark will be seen between the jar and the end of the chain near it. This electrical emanance out of the circuit of a discharging jar, which we call the *lateral explosion*; and to which it appears in the most conspicuous manner, serve the following method, which is that of

PRIESTLEY.

(432.) The jar being charged, and standing upon a table, insulate a thick metallic rod, and place so that one of its ends may be contiguous to the inside coating of the jar; and within about half an inch of the other end place a body of about 6 or 7 feet in length, and a few inches in breadth: then put a chain upon the table, so that one of its ends may be about an inch and a half distant from the coating of the jar: at the other end of the chain apply one knob of the discharging rod, and bring the other knob to the wire of the chain to make the explosion. On making the charge in this manner, a strong spark will be seen between the insulated rod, which communicates with the coating of the jar, and the body at its extremity, which spark does not alter the position of that body in respect to electricity. Whether this lateral explosion is received on flat and smooth surfaces, or upon sharp points, the spark always equally long and vivid.

SECT. IX. EXPERIMENTS ON THE INFLUENCE AND UTILITY OF POINTS.

(433.) Several of the preceding experiments tend to show the influence of points in respect to electricity. But the following are more particularly adapted to prove this influence, and to exhibit the utility of pointed metallic conductors in relieving buildings from damage by lightning. As Mr Cavallo says, "is one of the greatest benefits that mankind have received from the science of electricity."

(434.) I. *To discharge a jar silently.* When a large jar is fully charged, which would give a terrible shock, put one of your hands in

contact with its outside coating; with the other hold a sharp-pointed needle, and keeping the point directed towards the knob of the jar, proceed gradually near it, until the point of the needle touches the knob. This operation discharges the jar entirely; and you will either receive no shock at all, or so small a one as can hardly be perceived. The point of the needle, therefore, has silently and gradually drawn all the superfluous fluid from the inside surface of the electric jar.

(435.) II. *To draw the electricity from the prime conductor by a point.* Let a person hold the knob of a brass rod at such a distance from the prime conductor, that sparks may easily fly from the latter to the former, when the machine is in motion. Then let the winch be turned; and while the sparks are following one another, present the sharp point of a needle at nearly twice the distance from the prime conductor, that the knobbed rod is held; and no more sparks will go to the rod:—remove the needle entirely, and the sparks will be seen again;—present the needle, and the sparks disappear: which evidently shows, that the point of the needle draws off silently almost all the fluid that the cylinder throws upon the prime conductor. If the needle be fixed upon the prime conductor with the point outward, and the knob of a discharging rod, or the knuckle of a finger, be brought very near the prime conductor, though the excitation of the cylinder may be very strong, yet no spark, or an exceeding small one, will be obtained from the prime conductor.

(436.) III. *The electrified cotton.* Take a small lock of cotton, extended in every direction as much as conveniently can be done; and by a linen thread about 5 or 6 inches long, or by a thread drawn out of the same cotton, tie it to the end of the prime conductor: then turn the winch of the machine, and the lock of cotton, on being electrified, will immediately swell, by repelling its filaments from one another, and will stretch itself towards the nearest conductor. In this situation let the winch be kept turning, and present the end of your finger, or the knob of a wire, towards the lock of cotton, which will then immediately move towards the finger, and endeavour to touch it; but take with the other hand a pointed needle, and present its point towards the cotton, a little above the end of the finger, and you will observe the cotton immediately to shrink upward, and move towards the prime conductor.—Remove the needle, and the cotton will come again towards the finger. Present the needle, and the cotton will shrink again, which clearly proves that the needle draws off the electric fluid from the cotton.

(437.) IV. *The electrified bladder.* Take a large bladder well blown, and cover it with gold, silver, or brass leaf, sticking it with gum-water; suspend it at the end of a single thread, at least 6 or 7 feet long, hanging from the ceiling of the room; and electrify the bladder, by giving it a strong spark with the knob of a charged bottle: this done take a knobbed wire, and present it to the bladder when motionless; and you will perceive, that as the knob approaches the bladder, the bladder also moves towards the knob, and, when nearly touching it, gives it the spark which it received from the charged phial and thus it becomes

becomes electrified. Give it another spark, and, instead of the knobbed wire, present the point of a needle towards it, and the bladder will not be attracted by, but rather recede from, the point, especially if the needle be very suddenly presented towards it. This is one of Mr HENRY's experiments.

(438.) V. *The DANCING BALLS.* Fix a pointed wire upon the prime conductor, with the point outward; then take a glass tumbler, grasp it with your hands, and present its inside surface to the point of the wire upon the prime conductor while the machine is in motion: the glass in this manner will soon become charged; for its inside surface acquires the electricity from the point, and the hands serve as a coating for the outside. This done put a few pith balls upon the table, and cover them with this charged glass tumbler. The balls will immediately begin to leap up along the sides of the glass as represented *fig. 10. Plate CXXX.* and will continue their motion for a considerable time.

(439.) VI. *The ELECTRIC FLIES.* These flies are composed of small brass wires, *fig. 10. Plate CXXXVII.* fixed into a cap of brass, easily moveable upon an axis of the same metal, and exactly balanced, so that they may turn with the smallest force. The ends, which ought to be very sharp, are all bent one way, with regard to one another, as those belonging to *a, b*, in the figure; though the two sets of points constituting the two flies there represented, are contrary to each other; so that the whole flies must have a contrary motion. Fixing the axle with the two flies upon the prime conductor, and working the machine, both will begin to turn very swiftly, each in a direction contrary to that of the points. In this manner, with a powerful machine, several flies may be made to turn either in the same or in contrary directions; and by their gradual increase or decrease in size may represent a cone or other figure; for the course of each will be marked by a line of fire, and thus the whole will exhibit a beautiful appearance in the dark. The light is said to be more brilliant when the ends are slightly covered with sealing wax, grease, or other electric matter.

(440.) The flies, in this experiment, turn the same way whether the electricity be positive or negative; the reason will easily be conceived from the theory laid down, (PART II. SECT. IX.) viz. that in positive electricity the fluid issues from the body electrified, and that in negative electricity it enters into it. In the former case, the recoil of the fluid, which acts equally on the air and on the point from whence it issues, must continually put the point the contrary way; and in negative electricity, when the point solicits a continual draught of electric matter from the air, the direct impulse of the former must also produce a motion in the point in the course in which the fluid itself moves. In vacuo no motion is produced; because there is no air on which the fluid may act when it issues from the point. In like manner, when air is inclosed in a glass vessel, the motion of the electric fly soon stops; because the fluid cannot easily get through the air and the glass, and therefore its motions are impeded so that it cannot press with force sufficient to pro-

duce motion. On applying a conductor to the outside of the glass, the fly renews its motion; because an opportunity is now given to the fluid to escape, by running through the glass. But this, for the reasons already given, must soon cease, because a contrary action of the fluid instantly begins to take place; and in a short time become equal to that which urges it forward from the machine. The motion of the fly, therefore, stops for the same reason that a Leyden phial becomes at last saturated and cannot receive a greater charge. *Fig. 11.* shows another fly which turns perpendicularly by the same electric power.

(441.) VII. *To PERFORATE a GLASS TUBE.* *Fig. 9. Plate CXXX.* represents a small glass tube stopped at one end with a piece of cork; a wire with a ball, at one end of which is a brass ball; the other passes through a cork fitted to the upper part of the tube. This end of the wire is bent at right angles, so as to approach the side of the tube. Take out the upper cork and wire, and then pour some fallad oil into the tube; replace the cork, and push down the wire, so that the end of it may be near or rather below the surface of the oil; present the ball to the electrified conductor, holding the finger or any other conducting substance opposite to the bent end of the wire, and when the spark passes from the conductor to the brass ball, it will pass along the wire and perforate the tube to get at the finger, producing a curious agitation of the oil.

(442.) VIII. *The THUNDER HOUSE.* *Fig. 10. Plate CXXXIX.* is an instrument representing the side of a house, either furnished with a metal conductor, or not; by which both the bad effects of lightning striking upon a house not properly cured, and the usefulness of metallic conductors may be clearly represented. A is a board about three quarters of an inch thick, and shaped like the gable end of a house. This board is fixed perpendicularly upon the bottom board B, upon which the perpendicular glass pillar, CD, is fixed in a hole about 8 inches distant from the base of the board A. A square hole ILMK, about a quarter of an inch deep, and nearly one inch wide, is made in the board A, and is filled with a square piece of wood; which is made nearly of the same dimensions, because it must go so easily into the hole, that it may drop off by the least shaking of the instrument. A wire LK is fastened diagonally to this square piece of wood. Another wire IH of the same thickness, having a brass ball H, screwed on its pointed extremity, is fastened upon the board A; so also is the wire MN, which is shaped in a ring at O. From the upper extremity of the glass pillar CD, a crooked wire proceeds, having a spring socket F, through which a double knobbed wire slips perpendicularly, the lower knob G of which falls just above the knob H. The glass pillar DC must not be made very fast into the bottom board; but it must be fixed so as it may be pretty easily moved round its own axis; by which means the brass ball G may be brought nearer or farther from the ball H, without touching the part EFG. Now when the square piece of wood ILMK (which may represent the shutter of a window or the like) is fixed into the hole so, that the wire LK stands in the

dotted,

bottom representation IM, then the metallic communication from H to O is complete, and the instrument represents a house furnished with a proper metallic conductor; but if the square piece of wood LMIK is fixed so, that the wire LK stands in the direction LK, as represented in the figure, the metallic conductor HO, from the top of the house to its bottom, is interrupted at IM, which case the house is not properly secured.

(443.) Fix the piece of wood LMIK so, that a wire may be as represented in the figure, in which case the metallic conductor HO is discontinued. Let the ball G be fixed at about half an perpendicular distance from the ball H; then, turning the glass pillar DC, remove the former ball from the latter; by a wire or chain connect the wire EF with the wire Q of the jar P, and let another wire or chain, fastened to the hook touch the outside coating of the jar. Connect the wire Q with the prime conductor, and charge the jar; then, by turning the glass pillar DC, let the ball G come gradually near the ball H, and when they are arrived sufficiently near each other, the jar will explode, and the piece of wood LMIK will be pulsed out of the hole a considerable distance from the thunder house. The ball G, in this experiment, represents a electrified cloud, which, when it is arrived nearly near the top of the house A, the electricity strikes it; and as this house is not secured by a proper conductor, the explosion breaks off it, i. e. knocks off the piece of wood IM.

(444.) Repeat the experiment with only this variation, viz. that this piece of wood IM is fixed so, that the wire LK may stand in the direction IM, in which case the conductor HO is discontinued; and then the explosion will have no effect upon the piece of wood LM, this remaining in the hole unmoved; which shows the usefulness of the metallic conductor.

(445.) Again, unscrew the brass ball H from the wire HI, so that this may remain pointed. With this difference only in the apparatus, repeat the above experiments; and you will find that the piece of wood IM is in neither case moved from its place, nor any explosion will be produced; which not only demonstrates the preference of the conductors with pointed terminations to those with blunted ones; but also shows that a house furnished with sharp terminations, though not furnished with a regular conductor, is almost sufficiently guarded against the effects of lightning.

(446.) This apparatus is sometimes made in the shape of a house, as represented fig. 14. where, for the sake of distinctness, the side and part of the roof next the eye are not represented. The table end AC represents that of the thunder house, and may be used in the same manner with that above described, or more readily by the following method. Let one ball of the discharging rod touch the ball of the charged jar, and the other the knob A of the conductor AC of the thunder house: the jar will then of course explode, and the fluid will act upon the conductor just as mentioned. The conducting wire at the windows bb must be placed in a line. The sides and table, AC, of the house, are connected with the

bottom by hinges; and the building is kept together by a ridge on the roof.

(447.) To use this model, fill the small tube a with gunpowder, and ram the wire c a little way into the tube; then connect the tube c with the bottom of a large jar or battery. When the jar is charged, from a communication from the hook at C, on the outside, to the top of the jar, by the discharging rod; the discharge will fire the powder, and the explosion of the latter will throw off the roof, with the sides, back, and front, so that they will all fall down together. Fig. 15. represents a small ramrod for the tube a, and fig. 16. a pricker for the touch hole at C. Fig. 17. represents a mahogany pyramid, by means of which the same experiment may be exhibited. It is used in a manner similar to that just now described, the piece at a being thrown out by the discharge; by which means the upper part falls down in three pieces. Mr JONES of Holborn makes the front of the common thunder houses, as well as the powder house above described, with two pieces of wood or windows bb, which, by being placed in proper situations, the one to conduct and the other to resist the fluid, will illustrate by one discharge the usefulness of good conductors for securing buildings or magazines from the explosion of thunder, as well as the danger of using imperfect ones.

SECT. X. EXPERIMENTS with the ELECTRICAL BATTERY.

(448.) We have already taken notice of the prodigious force of the electrical batteries, and mentioned the caution necessary to be observed by electricians in making experiments with them. (See § 340, 341.) We now proceed to describe several of the principal experiments performed with them.

(449.) In charging a battery, a small conductor is preferred by Mr Cavallo, as much more convenient than a large one, because the disposition of the electric fluid is not so great. Henly's Quadrant Electrometer may be fixed either upon the prime conductor, as in fig. 14. Plate CXXV, or on the battery; in which last case, it should be placed upon a rod proceeding from the wires of the jars, and elevated 2 or 3 feet above them, if the battery be large. Even in common use it should be elevated some inches above the conductor. The index will seldom rise so high as 90°, as the machine cannot charge a battery so high as a single jar. Its limits are often about 60° or 70°.

(450.) I. THE FAIRY CIRCLES. Fix upon each of the knobs of the universal discharger, or upon the wires that support them, a flat smooth piece of metal or semi-metal, so that their surfaces may come so near each other, that the battery may be discharged through them; connect one wire of the discharger with the outside of the battery, and the other by the discharging rod with the inside, so as to make the discharge; which will produce the spot and circles, (fig. 2, 3, 4. Plate CXXV.) observed by Dr Priestley, upon the surface of each piece of metal fixed upon the discharger. These circles have been observed on the surface of no substances but metals, and they are most distinct on those that melt with the smallest heat. The most beautiful are produced by several repeated

peated discharges from a large battery. Mr Cavallo entitles these rings *Fairy Circles*, from their resemblance to spots so called, often observed on the grass in the fields, which some think are occasioned by lightning.

(451.) II. To MARK COLOURED RINGS ON METALS. This is an experiment of Dr PRIESTLEY. Put a plain piece of any metal upon one of the wires of the universal discharger; on the other fix a sharp-pointed needle, with its point opposite to the surface of the metal; then connect one wire of the discharger, with the outside of the battery, and the other with the discharging rod, and the inside. Explosions sent either from the point to the metal, or from the metal to the point, will gradually mark the surface of the piece of metal, with rings, consisting of all the prismatic colours, which are occasioned by the laminæ of the metal raised by the explosions. These coloured rings appear equally upon any of the metals, and are more or less numerous in proportion to the sharpness of the needle; the point of which is also coloured.

(452.) III. To reduce thick pieces of GLASS to POWDER, place a thick piece of glass on the ivory plate of the universal discharger, *fig. 5. plate CXXVIII.* and a thick piece of ivory on the glass, on which a weight from one to seven pounds is to be placed; take off the balls *a, b*, bring the points of the wires against the edge of the glass, and pass the discharge through the wires, by connecting one of the wires with the hook of the battery, and forming a communication, when the battery is charged, from the other wire to the ball. By this operation the glass will be broken, and some part of it shivered to an impalpable powder. When the piece of glass is strong enough to resist the shock, the glass is often marked by the explosion with the most lively and beautiful colours that can be imagined.

(453.) IV. To SPLIT WOOD BY ELECTRICITY. Fix some very dry white wood between the balls of the universal discharger, the fibres of the wood running in the same direction with the wires; then pass the shock through them, and the wood will be torn to pieces; or run the points into the wood, and then pass the shock, which will answer as well.

(454.) The IMITATION OF AN EARTHQUAKE, made by the explosion of a battery, is occasioned by the concussion given to different substances, by the explosion passing over their surfaces. Small sticks, cards, models of houses, (See § 446, 447.) or the like, should be placed on the surface of the body over which the explosion is to be sent, so as to stand very light. They will never fail to be shaken, and will often be overturned by the explosion. An explosion will not pass over the same length of surface of all bodies, though equally good conductors. The distance at which an explosion will strike over the surface of water, ice, wet wood, raw flesh, and most of the animal fluids, is much greater than that, which it can strike through in air only. These substances are therefore the best for making this remarkable experiment. To do this, it is only necessary, to insert part of the surface of any of these into the circuit of the two sides of a battery. Let a chain, com-

municating with the outside, be placed so as to most to touch the surface of a quantity of water 8 or 9 inches distant from another chain, and communicating with one end of the discharging rod. The report of the explosion in this way is much louder than when it passes through the air only. The concussion affects the whole body of the water, as may be very sensibly felt, by holding one hand deep under its surface during the explosion. The electrical spark, which passes over the surface of the water, in this experiment, has a striking resemblance to those FIRE-BALLS that are sometimes seen over the surface of the sea or land, during earthquakes; whence it appears evident, that these balls of fire are electrical phenomena.

(455.) VI. To MELT WIRES. In attempting to melt wires by the electrical fluid, you ought to use a battery containing at least 30 square feet of exposed surface; you may then connect the outside of the battery with a wire of about $\frac{1}{50}$ th of an inch in diameter, and from 12 to 24 inches in length; fix the other end of the wire to one of the balls of the discharging rod. On making the discharge, the wire will become red-hot, then melt, and fall on the floor or table in glowing globules. Sometimes the sparks are thrown to a considerable distance: if the force of the battery be very great, they will be so entirely dispersed by the explosion, that no part of the wire will be found after. "In melting wires of a considerable length," says Mr Cavallo, it is often observed, that when the force of the explosion is just sufficient to melt the wire red-hot, the redness begins first from one end of it, namely, that which communicates the positive side of the battery, and from thence gradually proceeds to the other end. This adds is another ocular demonstration of the existence of a SINGLE ELECTRIC FLUID." Those who adhere to the doctrine of TWO electric powers, and who plead for the vitreous and resinous fluids, bring very formidable arguments from an experiment, performed also with the battery, but with quite different substance. We shall quote them and arguments, as stated by them in a small Treatise on Electricity, lately published.

(456.) VII. PERFORATION OF PAPER BY ELECTRICITY. "A very curious experiment of perforation of paper by the electrical fluid, which also proves with great clearness the existence and action of the two electric powers, has been performed by Mr Atwood, who suspended a quire of paper by a line, in the manner of a pendulum, at a convenient altitude, so that its plane might be vertical. The largest charge from a battery was passed through it, while quiescent in an horizontal direction perpendicular to the plane, the effect of communication not touching the paper. The phenomena were, first, the aperture in the paper being protruded both ways from the middle: and not the smallest motion was communicated to the paper from the force with which the battery was discharged.

(457.) "In this experiment, the thickest and strongest paper was made use of, and the height from which it was suspended was 16 feet. It is an extraordinary appearance on the hypothesis of a single electric fluid, that a force sufficient to penetrate a solid substance of great tenacity and cohesive force

Should not communicate the smallest motion to the paper, when a breath of air would cause some sensible vibration in it. But the other phenomenon, i. e. the opposite direction in which the leaves are produced, tends very much to strengthen the opinion of two opposite currents; indeed, when the facts are taken together, it is scarcely possible to reconcile the hypothesis of a single power with the appearances exhibited.

(453.) "We are informed by Mr Symmer, that placed in the middle of a paper book, of the thickness of a quire, a slip of tin foil; in another of the same thickness, he put two slips of tin, including the two middle leaves between them; and upon passing the electric stroke through them, he found the following effects: In the first, the leaves on the side of the foil were pierced, while the foil itself remained unpierced; but at the same time he could perceive that an impression had been made on each of its surfaces, at a small distance from each other: such impressions were still more visible on the paper, and might be traced as pointing different ways. In the second, the leaves of the book were pierced, excepting two holes that were between the slips of foil; in these two, instead of holes, the two impressions in contrary directions were extremely evi-

dent." "If a quire of paper, without having any space between the leaves, be pierced by the electric stroke, the two powers will keep in the same track, and make but one hole in their passage through the paper; not but that the power from above, or that from below, sometimes darts into the paper at two or more different points, making many holes; but these generally unite before they go through the paper. They seem to pass rather about the middle of the quire, for there the edges are most visibly bent different ways; whereas, on the leaves near the outside, the holes often carry more the appearance of a power darting out, than of one darting into the quire.

(460.) "If any thin leaf of metal, such as gold or tin foil, be put between the leaves of the paper, and the whole is struck; the counteracting powers deviate from the direct track, and make their way in different lines to the metallic body, to strike it in two different points distant from each other about $\frac{1}{4}$ of an inch, more or less; the distance appearing to be generally less when the power is greatest; and whether they pierce, they make impressions upon it, they leave evident marks of motion from two different parts, in directions contrary to each other. When two slips of tin foil are put into the middle of a quire of paper, including two or more leaves between them, if the electricity be but weak, the counteracting powers only strike against the slips, but make no impression: if the shock be stronger, one of the slips is pierced, but seldom both; and it is in general to Mr Symmer, that the power which issued from the outside acted with greater force than that which passed from the inside."

(461.) However strongly the above facts and arguments may seem to militate against Dr Franklin's theory, they appear to confirm rather than overthrow Mr TYLER's hypothesis; which, though it likewise pleads for the doctrine of a

single electric fluid, admits that this fluid often moves in opposite directions, and indeed affords the only rational and probable solution of these phenomena. See PART II. SECT. II. III. VIII.—XI.

(462.) VIII. To MELT PIECES OF METALS. In order to melt such metals as cannot be drawn into wires, such as grains of platina, semi-metals, metallic ores, &c. Mr Cavallo advises, to set them in a train upon a piece of wax; to place this in the circuit, and to send an explosion from the battery through it, which if sufficiently strong will melt them. Or, if the quantity to be tried be large enough, it may be put into a small tube of glass, and an explosion sent through it from the battery.

(463.) IX. To show that the ELECTRIC FLUID prefers a SHORT PASSAGE through the air, to a LONG one through good conductors, Dr Priestley invented the following experiment. Bend a wire about 5 feet long in the form represented in fig. 11, Plate CXXX, so that the parts A and B may approach within half an inch of each other; and connect its extremities with the hook of the battery, and the discharging rod, as directed in experiment IV, § 454. Upon sending the explosion of a battery through it, a spark will be seen between A and B, which proves that the electric fluid prefers the short passage through the air to the long one through or along the wire. The whole charge, however, does not run from A to B, but part of it runs through the wire, which is proved by placing a slender wire between A and B; for with only this addition to the apparatus, the small wire will be scarcely made red-hot; whereas if the large bent wire be cut at C, so as to interrupt the circuit ACB, the small wire will be melted and even exploded, by the same charge which, before the wire was cut, hardly made it red hot. By this experiment, Dr PRIESTLEY says, the different degrees of conducting power in different metals may be tried, by using metallic circuits of equal length and thickness, and observing the difference of the passage in each, through the air.

(464.) X. These and many other important experiments upon METALS have been made by Dr VAN MARUM, by the grand electrical machine and battery in TEYLER'S MUSEUM at Haarlem. Some of the effects of this machine, without the battery, have already been described, (§ 37—380.) and those made with it are no less calculated to give an idea of its vast power. A battery of 135 phials, containing among them 130 square feet of coated surface, was charged by about 100 turns of the glass plates, the discharge of which melted an iron wire 15 feet long and one 150th of an inch diameter; and at another time they melted a wire of the same metal 25 feet long and one 240th of an inch diameter.

(465.) XI. MAGNETISM COMMUNICATED BY ELECTRICITY. With such an extraordinary power it was tried to give POLARITY to needles made out of watch springs of 3 and even 6 inches in length; as well as to steel bars 9 inches long, from a quarter to half an inch in breadth, and about the 12th part of an inch in thickness. The result was, that when the bar or needle was placed horizontally in the magnetic meridian, whichever way

the shock entered, the end of the bar that stood toward the north acquired the north polarity, and the opposite end acquired the south. If the bar, before it received the shock, had some polarity, and was placed with its poles contrary to the usual direction, then its natural polarity was always diminished, and often reversed; so that the extremity of it, which in receiving the shock looked towards the north, became the north pole, &c. When the bar or needle was struck standing perpendicularly, its lowest end became the north pole in any case, even when the bar had some magnetism before, and was placed with the south pole downwards.

(466.) All other circumstances being alike, the bars seemed to acquire an equal degree of magnetic power, whether they were struck while standing horizontally in the magnetic meridian, or perpendicular to the horizon. When a bar or needle was placed in the magnetic equator, whichever way the shock entered, it never gave it any magnetism; but if the shock was given through its width, then the needle acquired a considerable degree of magnetism, and the end of it which lay towards the west became the north pole, and the other end the south pole. If a needle or bar, already magnetic, or a real magnet, was struck in any direction, its power was always diminished. For this experiment, they tried considerably large bars; one being 7.08 inches long, 0.26 broad, and 0.05 thick. When the shock was so strong, in proportion to the size of the needle, as to render it hot, then the needle generally acquired no magnetism at all, or very little.

(467.) XII. CALCINATION AND REVIVIFICATION OF METALS. Experiments were also made with this very powerful battery concerning the calcination of metallic substances, and the revivification of their calces. It appears that the electric shock produced both these apparently contradictory effects. The metallic calces used in these experiments were of the purest sort; they were confined between glasses while the shock was passed over them. By these means the calces were so far revived as to exhibit several grains of the metal, large enough to be discerned by the naked eye, and to be easily separated from the rest.

(468.) Whenever a shock was employed, much greater than that which was necessary to fuse the metal, part of the metal was calcined, and dispersed into smoke. This calcination generally produced several filaments, of various lengths and thicknesses, which swam in the air. Those flying filaments of metallic calx were soon attracted if a conductor was presented to them; but after the first contact, they were instantly repelled, and generally broke into diverse parts.

(469.) Dr VAN MARUM, thinking that the machine was capable of charging a larger surface, added to it 50 jars, each of the same size with the former; so that his grand battery is now a square of 15-jars every way, and contains 225 square feet of coated glass. To ascertain the degree of the charge, he uses Mr Brook's electrometer; (p. 551.) fixed in the centre of the battery, 4 feet above the knobs of the jars. He tried whether this battery could be fully charged by the machine, and whether its increase of power was pro-

portional to the augmentation of its surface; and his expectations were fully answered. The former battery discharged itself over the uncoated part of the jars after 96 revolutions; and the present did the same after 160 turns of the machine. With the former battery, the Doctor had split a cylinder of box 3 inches in diameter, and 3 inches long, the section of which, through its axis, contained 9 square inches. With the 225 jars, he split a similar cylinder, 4 inches in diameter, and 4 in height, the section of which was 16 square inches. He found that to split a square inch of this wood in the same direction, required a force equal to 615 lb. and hence calculates that the power of this explosion was not less than 9,850 lb.

(470.) XIII. To determine whether ELECTRICITY and FIRE act upon metals in the same manner, Dr Van Marum caused wires of different metals to be drawn through the same hole, of the 38th part of an inch in diameter, and observed how many inches of each could be melted by the explosion of his battery; taking care, in all the experiments, to charge it to the same degree, ascertained by his electrometer. The results were as follow:—Of lead he melted 120 inches; of iron 120; of iron 5; of gold $3\frac{1}{2}$; of silver, copper, brass, not quite a quarter of an inch. These different lengths of wire, of the same diameter, melted by equal explosions, indicate, the Dr thinks, the degree in which each metal is fusible by electrical discharge. On comparing these with the fusibility of the same metals by fire, a considerable difference will be observed. By experiments of the academicians of Dijon, tin required a heat of 170° of Reaumur's thermometer; lead 230; silver 430; gold 563; copper 630; and iron 696. Thus tin and lead appear to be equally fusible by electricity, but not by fire, and iron, which by fire is less fusible than gold, is much more so by the electrical explosion. From these and some other experiments of the same kind, Dr Van Marum concludes, that, in melting metals, the electrical fluid acts upon them in a manner very different from the action of fire, so that the supposed analogy between these two powerful agents cannot be proved, either from the fusion of metals, or the ignition of combustible substances.

(471.) XIV. From these experiments Dr Van Marum was induced to make trial of the CONDUCTIVE EFFICACY of lead, iron, brass, and copper, as conductors to preserve buildings from lightning. In this respect, he found that a leaden conductor ought to be four times the size of one of iron, in order to be equal in point of safety. He has also proved the superiority of rods of chains, and of copper to iron, for this important use.

(472.) XV. In melting IRON WIRE by the explosion of the battery, the red hot globules are thrown to a very considerable distance, sometimes to that of 30 feet: this the Dr justly ascribes to the lateral force exerted by the electrical fluid. It is, however, remarkable, that the thicker the wire which is melted, the further are the globules dispersed: but this is accounted for, by observing that the globules, formed by the fusion of thinner wires, being smaller, are less able to overcome the

resistance of the air, and are therefore sooner stopped in their motion. Two pieces of iron wire being tied together, the fusion extended no further than from the end connected with the inside ending of the jars to the knot; though wire of the same length and thickness, when in one continued piece, had been entirely melted by an equal explosion.

(473.) XVI. A wire that was too long to be melted by the discharge of the battery, was sometimes broken into several pieces, the extremities of which bore evident marks of fusion; and the effect of electricity in shortening wire was very sensible in an experiment made with 18 inches of iron wire of the 55th of an inch in diameter, which, by one charge, lost a quarter of an inch of its length. An explosion of this battery through very small pieces, of nearly the greatest length that could be melted by it, did not entirely discharge the jars. In transmitting the charge through 30 feet of iron wire of the 240th of an inch diameter, the Dr found the residuum was sufficient to melt two feet of the same wire: but this residuum was much less when the wire was of too great a length to be melted by the first discharge. After an explosion of the battery through 180 feet of iron wire, of the same diameter with the former, the residuum was charged through 12 inches of the same wire, which did not melt, but only blued.

(474.) XVII. Twenty-four inches of LEADEN wire of the 38th of an inch in diameter, were entirely calcined by an explosion of this battery; the outer part of the lead rose in a thick smoke, the remainder was struck down upon a paper laid beneath it, where it formed a stain, which resembled the painting of a very dark cloud. When other wires were calcined, the colours were varied. In the stain made by the calcination of eight inches of this wire, the cloud appeared fully shaded with different tints of green, gray, brown, in a manner of which no description could give an adequate idea.

(475.) XVIII. Upon sending a charge through pieces of TIN WIRE of the 38th of an inch diameter, extended over a sheet of paper, a thick cloud of white smoke arose, in which many calcareous contents were discernible; at the same time a number of red hot globules of tin, falling upon the paper, were repeatedly thrown up again into the air, and continued thus to rebound from the surface for several seconds. The paper was marked with a yellowish clouded stain immediately under the wire, and with streaks or rays of the same colour issuing from it in every direction: some of these formed an uninterrupted line, others were made up of separate spots. To be certain of the colour of these streaks was not caused by the paper being scorched, the experiment was several times repeated, when a plate of glass and a lead covered with tin were placed to receive the globules. These, however, were stained exactly like the paper. On calcining five inches of the tin wire, the red-hot globules were thrown equally to the height of 4 feet, which afforded an opportunity of observing that each globule, in its course, diffused a matter like smoke, which continued to appear for a little while in the para-

bolic line described by its flight, forming a track in the air of about half an inch in breadth.

(476.) Dr VAN MARUM conjectures from this phenomenon, that when the globules approach the paper on which they fall, the matter issuing from their lower part strikes against its surface, and being elastic, forces them upwards again by its reaction. The clouded stain immediately under the wire, the Doctor attributes to the instantaneous calcination of its surface; whereas the remainder of the metal is melted into globules, which, while they retain their glowing heat, continue to be superficially calcined, and, during the process, part with this calcareous vapour.

(477.) From the plates given in the Dr's work of the stains made upon paper, by the calcination of iron, copper, brass, silver, and gold, it appears that those made by copper and brass wires are remarkably beautiful, and variegated with yellow, green, and a very bright brown. Eight inches of gold wire, one 60th of an inch in diameter, were, by the explosion, reduced to a purple substance, of which a part rose like a thick smoke, and the remainder, falling on the paper, left a stain diversified with different shades of this colour. Gold, silver, and copper, cannot easily be melted into globules. Dr VAN MARUM once accidentally succeeded in this: but it required a degree of electrical force so very particular, that the medium between a charge, which only broke the wire into pieces, and one which entirely calcined it, could not be ascertained by the electrometer.

(478.) XIX—LX. Mr BROOK, electrician at Norwich, made a great number of experiments to determine the force of batteries of inferior size in melting fine wires of different kinds. In these he took care to ascertain the degree to which his batteries were charged, by determining the power of the electricity by the weight which it was capable of raising by its repulsive power; and therefore, in the following experiments the phrase of batteries being charged to so many grains, implies that the repulsive power of the knob of the battery was able to raise that weight. Some of the most remarkable of these experiments were as follows:

(479.) " 1. With a battery of 9 bottles containing about 16 square feet of coated surface, charged to 32 grains of repulsion, which charge was sent through a piece of steel wire 12 inches long and one 100th of an inch thick 11 times; the wire was shortened one inch and a half, being then about 10½ inches long; the 12th time, the wire was melted to pieces.

(480.) " 2. A charge, with the same 9 bottles, to 32 grains of repulsion, being sent through a piece of steel wire 12 inches long and one 170th of an inch thick, the first time melted it into small globules.

(481.) " 3. A charge of the same 9 bottles to 32 grains, being sent through a piece of brass wire 12 inches long, one 170th of an inch thick, the whole of it was melted, with much smoke, almost like gunpowder; but the metallic part of it, after it was melted, formed itself, in cooling, chiefly into concave hemispherical figures of various sizes.

(482.) " 4. With only 8 of the above bottles charged

charged to 32 grains, the charge did but just melt 12 inches of the steel wire, one 170th of an inch thick, so as to fall into several pieces; which pieces in cooling formed themselves into oblong lumps, joining to each other by a very small part of the wire between each lump, which was not melted enough to separate, but appeared like oblong beads on a thread at different distances.

(483.) "5. The same 8 bottles charged to 32 grains, so perfectly heated 12 inches of brass wire, about one 170th of an inch thick, as to soften it to fall down by its own weight (from the forceps with which it was held at each end) upon a sheet of paper placed under to catch it; and when it fell down, it was so perfectly flexible, that by falling, it formed itself into a bent, or rather vermicular shape, and remained entire its whole length, i. e. about 12 inches when it was put into the forceps; but after it was fallen on the paper, it sagged so much as to be stretched by its own weight from 12 to about 15 inches long; and by falling on the paper it flattened itself the whole length of it, so that when it was examined with an half inch magnifier, it appeared about 5 or 6 times broader than it was in thickness.

(484.) "6. With 9 bottles, charged only to 20 grains, the charge was sent through 12 inches of a steel wire one 170th of an inch thick, which heated it enough to melt it so as to be separated in many places; and the pieces formed themselves into bead-like shapes, as in experiment 4.

(485.) "7. With the same 9 bottles charged to 20 grains, the charge was sent through 10 inches of brass wire one 170th of an inch thick; the wire was heated so red-hot as to be very flexible, yet it did not separate, but was shortened near $\frac{1}{4}$ ths of an inch.

(486.) "8. A charge of 9 bottles, charged to 20 grains, sent a second time through the last piece of wire, melted it afunder in 3 places.

(487.) "9. Nine bottles charged to 30 grains, and the charge sent through 12 inches of brass wire one 170th of an inch thick, treated it nearly as in experiment 5, except that it was separated in two places, and the pieces measured about 16 $\frac{1}{2}$ inches long; but perfectly flattened by its fall on the paper.

(488.) "10. Nine bottles charged to 30 grains, the charge being sent through 8 $\frac{1}{2}$ inches of brass wire the size of the last, wholly dispersed it in smoke, and left nothing remaining to fall on the sheet of paper placed under it.

(489.) "11. With 12 bottles, charged to 20 grains, the charge was sent through 10 inches of steel wire one 100th of an inch thick, which made the wire red-hot, but did not melt it.

(490.) "12. A second charge, the same as the last, was sent through the same piece of wire, which heated it red-hot as the first did, but it was not separated; this piece of wire was now shortened five 16ths of an inch.

(491.) "13. A charge to 25 grains, with the same 12 bottles, was sent through the last piece of wire, which melted it into many pieces, and many globules of calcined metal.

(492.) "14. A charge of 15 bottles, charged to 25 grains, was sent through 10 inches of steel wire one 100th of an inch thick, which melted it the

first time, and dispersed a great part of it about the room.

(493.) "15. A charge with the last 15 bottles charged to 20 grains, just melted 10 inches of steel wire the size of the former, so as to run into beautiful globules, nearly as in exp. 13.

(494.) "16. A charge of 15 bottles, charged to 15 grains, being sent through 10 inches of steel wire the size of the last, it was barely made red-hot but it was shortened one 10th of an inch by the stroke passing through it.

(495.) "17. The last piece of wire having a charge of 15 bottles, charged to 12 $\frac{1}{2}$ grains, sent through it, was not made red hot.

(496.) "18. A charge of the same 15 bottles charged to 25 grains, was sent through the same piece of wire, which seemingly tore the wire into splinters.

(497.) "19. Four bottles, charged to 30 grains, just melted 3 inches of steel wire one 170th of an inch thick, so as to fall into pieces.

(498.) "20. Five bottles, charged to 25 grains, most beautifully melted 3 inches of such wire, the last into large globules.

(499.) "21. Eight bottles charged to 15 grains, melted 3 inches of steel wire one 170th of an inch thick, similar to the 5 in the last experiment, nearly alike both in appearance and effects, as it might have been said to be the same.

(500.) "22. Ten bottles charged to 12 $\frac{1}{2}$ grains, rather exceeded exp. 19. but scarcely came up to exp. 20 and 21.

(501.) "23. Suspecting something in exp. 19, I found that though my bottles hitherto were nearly of the same size as I could procure they yet some of them were a little larger than others, and, which was the case in exp. 19, one of them was smaller than the other 3; so that I repeated the experiment with 4 bottles more equal in size and charged them to 30 grains, and the fusion was as perfect as in any.

(502.) "24. A charge to 20 grains, with the 4 bottles, very finely melted six inches of steel wire one 170th of an inch thick.

(503.) "25. With two bottles, charged to 20 grains, the charge was sent through one inch of such sized steel wire as the last, which only changed its colour.

(504.) "26. Three bottles with a 40 grain charge, dispersed one inch and a half of steel wire the size of the last, all about the room.

(505.) "27. As a steel wire of one 100th of an inch thick had nearly doubled the quantity of metal of a wire one 170th of an inch thick, it took three inches of the former, and sent a 30 grains charge with ten bottles through it, which melted it just as the five bottles did in exp. 20.

(506.) "28. Twenty bottles charged to 20 grains, melted 3 inches of steel wire, the size of the last, exactly similar to the foregoing experiment.

(507.) "29. As a steel wire of one 80th of an inch thick contains nearly twice the quantity of metal in the same length as a steel wire of one 100th, or four times the quantity of a steel wire of one 170th of an inch thick; so it might, from the foregoing experiments, be expected that 10 bottles

bottles, charged to 25 grains, would melt 3 inches of steel wire one 80th of an inch thick; but on many trials 20 bottles could not be procured that would bear the discharge, when charged to 25 grains; for at the discharge there would be always one or more bottles broken or perforated. I was now reduced to the necessity of being content with getting bottles of any size that would bear the required charge, from one to three gallons each, or that contained from about 150 to 300, or more, square inches of coated surface, each; but all in vain, my only resource left (as I was not near any glass-house), was to increase the quantity of surface, and not to charge so high, and to proportion the one to the other: a third part was considered on to be tried; that is, instead of about 66 feet of coating, I added one third, or 12 feet, which made it 48 feet; and that, instead of charging to 25 grains, or 24 grains, which divides 3 better, to omit one third of the height of the charge, which leaves 16 grains: and thus I succeeded perfectly well; for 3 inches of steel wire one 80th of an inch thick was as curiously melted with 48 feet of coated surface, charged to 16 grains, as any of the former.

(512.) " These bottles, thus broken in large distances, seem always to break, or to be struck through, nearly in the thinnest, but never in the thickest place, which shows the necessity of the distance in the glass.

(513.) " 30. As in exp. 19. and 21. where the power is but half the quantity of coated surface the latter, charged to 30, and the latter to 15 grains, to know how 48 feet of coating must be charged to produce the same effect exactly: and the quantity of the coating in 4 bottles, containing of a little more than six feet and a half, contained in 48 feet a little more than 7 times; I tried by charging 48 feet only to a little more than 4 grains, or only about one 7th part so high, 4 times 7 is 28; that is, but two less than 30: and this had exactly the same effect on the wire, which was one 170th of an inch thick, and 3 inches long, as the former.

(514.) " 31. As the last experiment agreed so fully with exp. 19. and 20. the next thing tried was to see the effect of 48 feet of coated surface charged to a little more than 4 grains, upon six inches of steel wire, the size of the last; but this was only made very faintly red.

(515.) " 32. A repetition of the last experiment with the same length of the same wire, to see how the same charge might be sent through before the wire would be melted, and to observe the appearance of the wire after each stroke; the 8th stroke melted it into several pieces. After the first stroke, the redness grew less every time, even the last time, when it was separated. The first stroke, though little more than fairly red, made it so flexible, that by a little more than its own weight (about a penny-weight more), it was apparently made perfectly straight when it was cooled; about the 3d or 4th stroke it began to appear zig-zagged; after the 6th stroke the surface appeared rough; after the 7th stroke the surface was very roughly bristled or scaly; and some of the scales had fallen upon a piece of white paper, placed under it, about half an inch distance below it. The 8th

stroke melted it in 3 places; and at those places where the angles appeared the sharpest or most acute, a great number of the scaly appearances were driven off about the paper, which appeared like splinters (see exp. 18.); some of them were almost one tenth of an inch long, and some of them about a third or a fourth part of the diameter of the wire in breadth, and very thin: after the 7th stroke it was shortened seven 16ths of an inch: the wire was one 170th of an inch thick.

(512.) " 33. Repeating exp. 31. again with the same size and length of wire, and the same battery charged the same, in order to observe the method of the wire shortening, having fixed an insulated gage parallel to and about a quarter of an inch distant from it: after the first stroke, which made the wire fairly red, (it being fixed at one end, that the shortening might appear all at the other, which was held so as either to contract or dilate,) I observed that it shortened considerably as it cooled; repeating the stroke, it did the same, and so on till it was melted, which was by the 8th stroke, as before. At the instant that the stroke passed through the wire, it appeared to dilate a little, and after it was at its hottest, it gradually contracted after every stroke as it cooled, about one 16th of an inch each time; the dilating was so very little, as to bear but a very small proportion to its contraction, and sometimes it was doubtful whether or not it did dilate at all; but after all the observations it appeared oftener as if it did dilate, than as if it did not.

(513.) " 34. The same 48 feet, negatively charged to a little more than 4 grains, melted 3 inches of steel wire one 170th of an inch thick, the same as the positive charge did in exp. 30.

(514.) " 35. The same battery of 48 feet of coated surface, charged to a little more than 8 grains, melted 3 inches of steel wire one 100th of an inch thick. This is very nearly in proportion to exp. 27. but here the charge was negative, and the fusion was the most pleasing of any I have hitherto had; probably owing to the charge, by chance, happening to be so well adjusted as to be exactly sufficient to melt the wire and no more: it held hot the longest, and the fused metal ran into the largest globules; probably the length of the time that the heat continued, was owing to the charge being just sufficient, and to the size of the lumps that the fused metal formed itself into.

(515.) " 36. A repetition of exp. 1. with 12 inches of steel wire, one 100th of an inch thick, but with this difference, that as then I used only 9 bottles, containing about 16 square feet of coated surface charged to 32 grains, I here used 18 bottles containing about 32 square feet of coating charged to only 16 grains. This was done, to observe the progress of the destruction of the wire, as in exp. 32, as well as to prove the similarity of the effect. The wire being the same size, sort of metal, and length, as recited just above; the first stroke made it fairly red-hot the whole length of it with smoke and smell, changed its colour to a kind of copperish hue, and shortened it considerably; the 2d stroke made it of a fine blue, but it did not appear red, and shortened it more; at the 3d stroke, it became zigzagged, many radii were very visible

at the bendings, and continued to shorten till the 11th stroke, when one of the bottles in the 2d row of the battery was struck through: the fracture was covered over with common cement, its place supplied by changing place with one in the 3d row, supposing the mended one to be the weakest; and thus, with the battery in this state, I made the 12th stroke, which separated the wire, as in exp. 1. but this wire was shortened only one inch.

(316.) "37. A charge of 48 feet to 8 grains, sent through 3 inches of copper wire one 170th of an inch thick, 7 times, made it zigzagged, but not much shorter; the 8th stroke separated it at one end, close to the forceps which held it, but it did not appear to be made sensibly red-hot at all, notwithstanding it must have been often so at the place where it was melted; which space was so very small as barely to be perceptible: like as when a point is set upon any flat surface of iron, and a stroke from a pound pial being sent through, both the point and the flat surface where the point rested, if examined with a magnifying glass, will be found to have been melted, and a speck may be seen; but the redness of the metal will scarcely be visible.

(317.) "38. A charge of 48 feet, to 16 grains, was sent through six inches of lead wire one 50th of an inch thick, which melted it into many pieces.

(318.) "39. A charge of 48 feet, to 15 grains, was sent through six inches of wire like the last, which did not separate it, but made it smoke.

(319.) "40. A charge like the last was sent through the last piece of wire a 2d time; which melted it into several pieces.

(320.) "The law by which wires resist destruction, in proportion to the thickness of the wire, does not seem to be so equable, by much, in the lead as in the steel wire. For a charge of 4 grains, in exp. 34. melted 3 inches of lead wire one 66th of an inch thick: but it took a charge of about 3 times that power to destroy 3 inches of lead wire one 50th of an inch thick; which is about double the quantity of metal in the same length, as in that of one 66th of an inch thick. Thus it is easy to find, what different resistance a wire of any of the foregoing metals, of equal size and length, will make to the electrical stroke or to lightning.

(321.) "The length of the electric circuit, in which the different wires were placed, in the foregoing experiments, from the nearest part of the inside to the nearest part of the outside of the battery, exclusive of the length of the said wires, was about 8 feet.

(322.) "Notwithstanding the easy destruction of the lead wire by the electrical stroke, it seems greatly to be doubted, whether any thunder strokes happen in any place whatever, strong enough to destroy a strip of lead 4 inches broad and of the thickness of about 8 lb. to the foot. Whence it may be presumed, that such a strip of lead may be perfectly safe for conductors through buildings of any kind whatever: as it is not much subject to decay in any common exposure:

(323.) "41. Two gentlemen coming in to see a piece of wire melted by electricity, I proceeded to show it them, by fixing 12 inches of steel wire one 170th of an inch thick, in the forceps, and then (supposing the electrometer and all other

things ready placed) to charge the battery, but the electrometer did not move; nevertheless I continued charging as I supposed; but still the electrometer remained as it was, although I had been charging much longer than would have been necessary, contrary to my design, which was to take a small wire, that a small charge might be sufficient. Having been charging a long time, I left off to look about the apparatus, in order to see any thing was not right: as I was looking, I found there was no communication to the electrometer and heard a small crackling in the battery, which convinced me that it was charged. According I made the discharge, expecting nothing unusual but the wire was dispersed seemingly in a very violent manner. The report was so very loud that our ears were stunned, and the flash of light so very great, that my sight was quite confused for a few seconds. The singularity of the appearance attending this experiment led me to insert it."

SECT. XI. Of the ELECTRICAL KITE.

(324.) The justly celebrated Dr FRANKLIN was the first who made use of the electrical kite, to draw the electric fluid from the clouds. See p. 1. Since his first successful attempt, various methods have been tried by different electricians to improve the construction of this instrument; such as, enlarging its size to 7 feet in length; by fixing an iron spike on the upper part of it, to collect the electric fluid; by making the string of twine wrapped about a brass wire; by covering the paper of the kite with turpentine, to defend it from rain, &c. the like. It was soon found, however, that most of these were real improvements; and that the additional size and iron spike only tended to render the kite unnecessarily heavy and consequently useless, except when the wind blew strong, and that the brass wire during the operation was continually snapping, and often broken in many places.

(325.) The most convenient size is now found to be about 4 feet in length and 2 in breadth: the best covering is common varnish, or well beated linseed oil. Paper for the body of the kite is preferable to silk or linen, both for convenience and cheapness. But, though some eminent electricians cover the back part of the straiter with foil, and furnish its upper extremity with a slender pointed wire, to draw the electricity from the clouds more effectually; yet it is acknowledged that in general neither of these improvements assist the electricity at the string, or increase in the smallest degree.

(326.) Mr CAVALLLO, who has made many experiments in atmospheric electricity, observes that the whole power of this machine lies in the string. A common school boy's kite answers the purpose as well as any other. The best method of making the string is by twisting two threads of common twine with one of that copper thread which is used for trimmings. When a kite constructed in this manner was raised, he says, he always observed the string to give signs of electricity, except once. The weather was warm, and the wind so weak, that the kite was raised with difficulty, and could hardly be kept up for a few minutes. Afterwards, however, when the wind increased, he obtained, as usual, a pretty strong position.

positive electricity. Concerning the management of this kite he gives the following directions.

(127.) "In raising the kite, when the weather is very cloudy and rainy, in which time there is danger of meeting with a great quantity of electricity, generally use to hang upon the string AB (*Plate CXXX, fig. 12.*) the hook of a chain C, the other extremity of which falls on the ground. Sometimes I use another caution besides, which is to stand upon an insulating stool; in which situation, I think, that if any quantity of electricity, suddenly discharged by the clouds, strikes the kite, it cannot much affect any person. As to insulated rods, and other such like instruments, that some gentlemen have used to raise the kite without any danger of receiving a shock; fit for the purpose, as they may appear in theory, they are yet very inconvenient to be managed. Except the kite be raised in the time of a thunder storm, there is no great danger for the operator to receive any shock. Although I have raised my electrical kite hundreds of times without any caution whatever, I have very seldom received a few exceedingly slight shocks in my arms. In time of a thunder storm, if the kite has not been raised before, I would not advise a person to raise it while the stormy clouds are just overhead; the danger at such a time being very great, even with the precautions above mentioned: at that time the electricity of the clouds may be observed, without raising the kite, by a ball electrometer held in the hand in an open place, or, if it rains, by the electrometer for rain, as he described hereafter.

(128.) "When the kite has been raised, I generally introduce the string through a window in a room of the house, and fasten it to a strong silk line, the extremity of which is generally tied to a heavy chair in the room. In *fig. 13 of Pl. CXXX*, AB represents part of the string of the kite, which comes within the room; C represents the silk line; DE, a small prime conductor, which by means of a small wire, is connected with the string of the kite; and F represents the quadrant electrometer, fixed upon a stand of glass covered with sealing wax, which I used to put near the prime conductor, rather than to fix it in a hole upon the conductor, because the string, AB, sometimes takes so as to pull the prime conductor down; in which case the quadrant electrometer remains fixed upon the table, otherwise it would be broken. I have often experienced before I thought of this method. G represents a glass tube, about 18 inches long, with a knobbed wire cemented to its extremity, with which instrument I use to observe the quality of the electricity, when the electricity of the kite is so strong, that I think it not safe to come very near the string. The method is as follows:—I hold the instrument by that extremity of the glass tube which is farthest from the wire, and touch the string of the kite with the knob of the wire, which being insulated, acquires a small quantity of electricity from it; which is sufficient to ascertain its quality, when the knob of the instrument is brought near an electrified electrometer.

(129.) "Sometimes when I raise the kite in the night-time, out of the house, and where I have not the convenience of observing the quality of its electricity by the attraction and repulsion, or even

by the appearance of the electric light, I make use of a coated phial, which I can charge at the strings, and, when charged, put it into my pocket; where, in it will keep charged even for several hours.

(130.) "The construction of this phial is as follows:—Besides the coating of the inside and outside, that this phial has, like any other of the same kind, a glass tube, open at both ends, is cemented into its neck, and proceeds within the phial, having a small wire fastened to its lower extremity, which touches the inside non electric coating. The wire with the knob of this phial is cemented into another glass tube, which is nearly twice as long, and smaller than the tube cemented into the neck of the phial. The wire is cemented so, that only its knob projects out of the one end, and a small length of it out of the other end of the tube. If this piece with the wire be held by the middle of the glass tube, it may be put in or out of the tube which is in the neck of the phial, so as to touch the small wire at the lower extremity of it and that without discharging the phial, if it is charged. I have kept such a phial charged for 6 weeks together, and probably it would keep much longer if it were to be tried. The ingenious young electrician may make use of such a phial for several diverting purposes.—The piece of glass which serves to hold the wire by, is rather better to be fixed above than below the ball. In this case the ball is perforated quite through, and the wire projects a short way above it; to which the glass tube is cemented.

(131.) "By making use of this instrument, I am obliged to keep the kite up no longer than it is necessary to charge the phial, in order to observe the quality of the electricity in the atmosphere; for after the kite has been drawn in and brought home, I can then examine the electricity of the inside of the phial, which is the same as that of the kite. When the electricity of the kite is very strong, I fix a chain communicating with the ground, at about six inches distance from the string, which may carry off its electricity in case this should increase so much as to put the bystanders in danger."

(132.) Mr Cavallo, however, with all his caution, could not always avoid danger, even when there was no thunder; as appears from the following account: "October 18, 1775. After having rained a great deal in the morning and night before, the weather became a little clear in the afternoon, the clouds appearing separated, and pretty well defined. The wind was west, and rather strong, and the atmosphere in a temperate degree of heat. In these circumstances, at three P. M. I raised my electrical kite with 360 feet of string. After the end of the string had been insulated, and a leather ball covered with tin foil had been hanged to it, I tried the power and quality of the electricity, which appeared to be positive and pretty strong. In a short time, a small cloud passing over, the electricity increased a little; but the cloud being gone, it decreased again to its former degree. The string of the kite was now fastened by the silk lace to a post in the yard of the house, and I was repeatedly charging two coated phials and giving shocks with them. While I was so doing, the electricity, which was still po-

sive, began to decrease, and in two or three minutes it became so weak that it could hardly be perceived with a very sensible cork-ball electrometer. Observing at the same time, that a large and black cloud was approaching the zenith (which, no doubt, caused the decrease of electricity), indicating immediate rain, I introduced the end of the string through a window in a first floor room, wherein I fastened it by the silk lace to an old chair. The quadrant electrometer was set upon the same window, and was by means of a wire connected with the string of the kite.

(533.) Being now three quarters after 3 o'clock, the electricity was absolutely unperceivable, however, in about three minutes time it became again perceivable; but, upon trial, was now found to be negative. It is therefore plain, that its stopping was nothing more than a change from positive to negative; which was evidently occasioned by the approach of the cloud, part of which by this time had reached the zenith of the kite, and the rain also had begun to fall in large drops. The cloud also came farther on; the rain increased; and the electricity keeping pace with it, the electrometer soon arrived at 15° . Seeing now that the electricity was pretty strong, I began again to charge the two coated phials, and to give shocks with them; but the phials had not been charged above three or four times, before I perceived that the index of the electrometer was arrived at 35° , and was keeping still increasing. The shocks being now very smart, I desisted from charging the phials any longer; and considering the rapid advance of the electricity, thought to take off the insulation of the string, in case that, if it should increase farther, it might silently be conducted to the earth without causing any bad accident by being accumulated in the insulated string. To effect this, as I had no proper apparatus near me, I thought to remove the silk lace, and fasten the string itself to the chair. Accordingly I disengaged the wire that connected the electrometer with the string; laid hold of the string; untied it from the silk lace, and fastened it to the chair: but while I effected this, which took up less than half a minute of time, I received about 12 or 15 very strong shocks, which I felt all along my arms, in my breast and legs; shaking me in such a manner, that I had hardly power enough to effect my purpose, and to warn the people in the room to keep their distance. As soon as I took my hands off the string, the electricity (in consequence of the chair being a bad conductor) began to snap between the string and the shutter of the window, which was the nearest body to it. The snappings which were audible at a good distance out of the room, were at first isochronous with the shocks which I had received; but in about a minute's time, oftener; so that the people of the house compared their sound to the rattling noise of a jack going when the fly is off. The cloud now was just over the kite; it was black, and well defined, almost of a circular form, its diameter appearing to be about 45° . The rain was copious, but not remarkably heavy. As the cloud was going off, the electrical snapping began to weaken, and in a short time became inaudible. I went then near the string, and finding the elec-

tricity weak, but still negative, I insulated it again, thinking to keep up the kite some time longer: but observing that another larger and denser cloud was approaching towards the zenith, and I had then no proper apparatus at hand to prevent every possible bad accident, resolved to pull the kite in: accordingly a gentleman who was by me began pulling it in, while I was winding up the string. The cloud was now very nearly over the kite; and the gentleman told me that he had received one or two slight shocks in his arms, and that, if he was to receive another, he would certainly let the string go: upon which I laid hold of the string, and pulled the kite in as fast as I could without any farther observation; being ten minutes after four o'clock.—N. B. There was neither thunder nor lightning perceived that day nor indeed for some days before or afterwards.

(534.) The general laws deduced by Mr. Cavendish from his experiments with the kites, are as follow:

(535.) "I. The air appears to be electrified all times; its electricity is constantly positive, and much stronger in frosty than in warm weather, but it is by no means less in the night than in the day time.

(536.) "II. The presence of the clouds generally lessens the electricity of the kite; sometimes has no effect upon it; and it is very seldom that it increases it a little." To this the above mentioned instance is a most remarkable exception.

(537.) "III. When it rains, the electricity of the kite is generally negative, and very feeble.

(538.) "IV. The aurora borealis seems not to affect the electricity of the kite.

(539.) "V. The electric spark taken from the string of the kite, or from any insulated conductor connected with it, especially when it does rain, is very seldom longer than a quarter of an inch; but it is exceedingly pungent. When the index of the electrometer is not higher than 20, the person that takes the spark will feel the effect of it in his legs; it appearing more like the discharge of an electric jar, than the spark taken from the prime conductor of an electrical machine.

(540.) "VI. The electricity of the kite is generally stronger or weaker, according as the string is longer or shorter; but it does not keep any exact proportion to it. The electricity, for instance, brought down by a string of 100 yards, may raise the index of the electrometer to 20, when, with double that length of string, the index of the electrometer will not go higher than 25.

(541.) "VII. When the weather is damp, and the electricity is pretty strong, the index of the electrometer, after taking a spark from the string, or presenting the knob of a coated phial to it, rises surprisingly quick to its usual place; but in dry and warm weather it rises exceedingly slow.

(542.) The principal use of the electrical kite is to shew the electricity of the atmosphere; and it is perhaps the only instrument, that will do this at all times with certainty, though several others have been invented for that purpose, as will be noticed in next section. But another use to which electrical kites have been applied, is to bring down quantities of the electric fluid from the upper regions.

gions of the atmosphere, for the purpose of supplying that deficiency of electricity, which is supposed to be hurtful to vegetation. The Abbe BATHOLON advises for this purpose to erect conductors, or lanch paper kites on mountains, in order to seek out and direct this fluid towards the surface of the earth. "These (he adds) will immediately and at all times obtain an electricity so much the more strong as the height of the atmosphere shall be the more considerable." With this he even proposes to double the kites. "Upon a high mountain (says he) there were lanch'd 2 electric paper kites, one of which was fixed to the inferior extremity of the other, thus gaining a double advantage in point of height; the consequence of which was, that the electric effects were incomparably greater than those produced by a single instrument."

(543.) The cautious electrician will, indeed, be apt to fear that these effects may sometimes be too great. As an evidence that such fears are not needless, and that no small caution is necessary to be observed in making experiments with the electrical kite, we shall add other two instances of the danger attending them, to those above-mentioned by Mr Cavallo.

(544.) The one is recorded by Mr LOAMMI BALDWIN, in the *Memoirs of the American Academy*, vol. I. p. 257, and was attended with a very singular phenomenon. Mr. Baldwin having "in 1771, raised an electrical kite during the approach of a severe thunder storm, observed himself surrounded with a rare medium of fire, which, as the cloud rose nearer the zenith and the kite rose higher, continued to extend itself with some gentle faint flashes. Mr Baldwin felt no other effect, than a general weakness in his joints and limbs, and a kind of listless feeling; all which he observed, might possibly be the effect of surprise, though it was sufficient to discourage him from persisting in any farther attempt at that time.— He therefore drew in his kite, and retired to a room till the storm was over, and then went to his house, where he found his parents and friends much more surpris'd than he had been himself; who, after expressing their astonishment, inform'd him, that he appear'd to them (during the time he was raising the kite) to be in the midst of a large bright flame of fire, attended with flashes; and that they expected to see him every moment fall a sacrifice to the flame. The same was observed by some of his neighbours who lived near the place where he stood." Mr Nicholson, who quotes this anecdote, says, "the cloud must have been negative."

(545.) The other instance is related by Mr BENNETT, who, "having, on the 5th July 1788, raised a kite with 200 yards of string, when it had been flying about an hour, a dark cloud appeared at a great distance, and changed the electricity from positive to negative. The electric power increased till the cloud became nearly vertical, when some large drops of rain fell, and our author, attempting to secure the string from wet, received such a strong shock in his arm as deprived it of sensation for a few seconds. The explosion was heard at the distance of 40 yards, like the loud crack of a whip."

SECT. XII. Of ELECTROMETERS, and the VARIOUS METHODS used for MEASURING ELECTRICITY.

(546.) Various instruments have been invented and different methods attempted, for measuring the quantity of electricity in a charged phial or battery; ascertaining its quality and strength, and comparing it with that of any other electrified body; as well as for measuring the electricity of the atmosphere. We have already described the quadrant electrometer most commonly used for the former of these purposes, which was invented by Mr LANE and improved by Mr HENLY. See § 347. We shall now proceed to describe several other electrometers, invented for the latter purpose, as well as for obtaining various other objects in electricity, both artificial and natural.

(547.) One of the most simple of electrometers for ordinary purposes is represented in *fig. 14. Plate CXXX*. It consists of nothing more than a linen thread, with a small hollow cork ball at each end; which, when suspended by the middle of the thread on a conductor, serves to show the kind of electricity, as well as to give some idea of its quantity, from the force with which the balls are attracted and repelled.

(548.) A more complicated instrument, but founded on the same simple principles, and containing 4 electrometers, is represented in *fig. 15.*—A is the basis of the stand which supports these, and is made of common wood. B is a pillar of wax, glass, or baked wood. To the top of the pillar, if it be of wax or glass, a circular piece of wood, C, is fixed; but if the pillar be of baked wood, that may constitute the whole. From this circular piece of wood proceed 4 arms of glass, or baked wood, suspending at their ends 4 electrometers, two of which, D, E, are silk threads about 8 inches long, suspending each a small downy feather at its end. The other two electrometers, F, G, are those with very small balls of cork, or of the pith of alder; and they are constructed in the following manner: *ab* is a stick of glass about six inches long, covered with sealing wax, and shaped at top in a ring: from the lower extremity of this stick proceed two fine linen threads, *cc*, about five inches long, each suspending a cork or pith-ball *d* about one 8th of an inch in diameter. These threads should be wetted in a weak solution of salt. When this electrometer is not electrified, the threads *cc* hang parallel to each other, and the cork balls are in contact; but when electrified, they repel one another, as represented in the figure. When it happens to be inconvenient to use the insulating stand A B, the electrometers may be easily supported by a glass rod or tube.

(549.) In many cases the quantity of electricity is so small, that it does not discover itself by any of the ordinary electrometers; and in others, though the quantity be very great, yet we are destitute of any proper standard to enable us to compare it with another of apparently the same height, or to determine the degrees of charge which the electrified substance progressively receives.

(550.) Dr Priestley recommends in the former case, a single thread of silk as it comes from the

worm; which, being extremely light and flexible, very readily discovers the electric properties of any body, by being first attracted and then repelled by it: and, as this substance at the same time has a power of retaining its electricity very strongly, we have thus an opportunity of determining whether the body from which it received the electricity was positive or negative. But this electrometer is not found to be endowed with all the sensibility to be wished for.

(551.) One of the best electrometers, if not the very best hitherto invented for measuring artificial electricity, is that of Mr A. Brook of Norwich. It is acknowledged by electricians to be constructed on the only true principle on which machines for measuring the quantity of electricity can be made. The mere attraction of any light body shows indeed that the substance which attracts it is electrified; but this property is by no means calculated to discover the comparative strength of it, on account of its continual variation. Thus, if we hold any body within the electrified atmosphere of another, though it be first attracted pretty strongly, yet that attraction will be constantly diminishing, and at last changed into a repulsive power; but the latter, after it has once taken place, continues invariable as long as any degree of electric charge remains.

(552.) Mr Brook's electrometer is represented in miniature on *Plate CXXXI*. Of this useful instrument the ingenious inventor gives the following description, in his *Miscellaneous Experiments and Remarks on Electricity*, &c. "Fig. 1. shows the electrometer as it appears when it is ready to be used. Fig. 2. is an arm, the ball of which is to be laid into the cup A, to make a communication to a battery, &c. to be afterwards explained." *Plate CXXXII*, in 12 figs. "exhibits the outlines of all the different parts, both internal and external of the electrometer, in the proportion and in the manner in which they are made and put together." In Mr Brook's Treatise, they are represented in their full size, upon a large plate. "A, A, A, A, N, fig. 1, and fig. 1, a, represent the electrometer in full size all put together; except where fig. 1, a is separated from fig. 1. The foot B, fig. 1, a, is a piece of board, $9\frac{1}{4}$ inches square, resting on 3 pins CCc, seen at the under side of it. The pins CC, with their broad heads, are screws to set the electrometer upright withal. D, is a solid piece of glass, of any length and size, sufficient to support and insulate the instrument, wherever it is to be placed: the length of that here described is about 9 inches and a half between the sockets in which it is fixed, and its upper end is seen in the socket, or cap M, fig. 1.

(553.) "The arms, G 1, and G 2, and the balls I 1, and I 2, fig. 1, are all made hollow, of thin copper, that they may be as light as possible. The arms G 1, and G 2, with the ball F, turn round on the large bent wire H; and when in use they are put nearly at a right angle with G 2, and H; being all turned to the off side, so as to be, as much as possible, out of each other's atmospheres, or the atmosphere of a jar, battery, prime conductor, or the like. At K, is represented a kind of dial-plate, with an index; this index is carried once round by the motion of the arm G 2, with

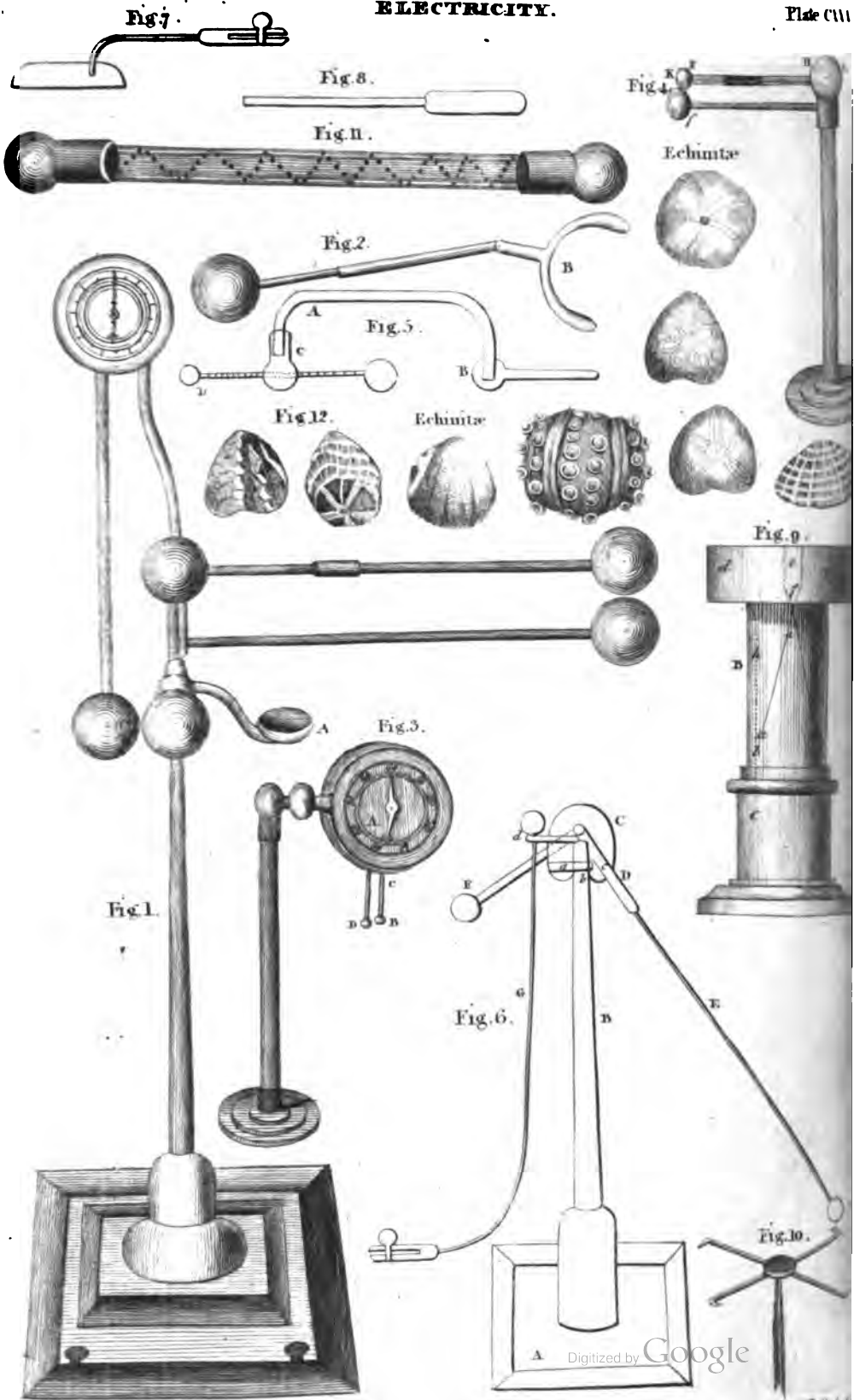
its ball I 2, moving through a quarter, or 90° of a circle; the motion is given to the arm of its ball, by the repulsive power of the charge of a jar, &c. between the two balls I 2, and L. The ends of the index, from the center, are of different lengths: the longest end reaches to a graduated circle, divided into 90 equal parts, answering to the 90° , which the arm G 2 moves through: the shortest end reaches to a smaller circle, which may be divided into any number of equal parts answering to the divisions on the arm G 1, with its sliding weight N, each of which, is equal to one grain, and the whole face is covered with a watch glass to prevent the electricity from flying off, or clapping at the points.

(554.) "The upper end of the glass supporter D, is cemented into the brass cap, or socket M, fig. 1. This cap enters the ball L, at the bottom of it, and is screwed into its upper part at c. The top part of the cap M, is tapered off to a cone about one inch and a half long. The lower end of the wire H, has a hole made conically into it, so as to receive the upper part, of the cap M, which permits all the upper part of the electrometer to turn round any way that may be necessary. The ferret O, with its base, is perforated, that the lower end of the wire H, may go through it. The arm b, which supports the cup N, is screwed into the base of the ferret O, and turns round upon the wire H. The cup N is to receive the ball of the arm, fig. 9. This arm, which is shown separate in *Pl. CXXXI*, fig. 2, shortens or lengthens as may be wanted, by a wire sliding into a tube the end of the wire is slit, forming a spring in the tube, to give it steadiness. In this arm is a kind of rule joint at d, that it may give way easily, if wanted: the semicircular end of the arm is a spring, which may be slipped on to a ball from the prime conductor, or the conductor itself, (if it be a jar, or battery: the ends of it are flat and broad, as represented at B, fig. 2, *plate CXXXI*).

(555.) "Fig. 2. shows the wheels, &c. in the electrometer. The wheel, A, has 48 teeth, and takes into the wheel, B, of 12 teeth. The axis of B, carries the index K, fig. 1, once round, by the arm C, fig. 2, being repelled to D, a quarter, or 90° of a circle. The arm C, is screwed into the under side of the axis of the wheel of 48 teeth E, is a solid leaden weight, supported and made fast to the upper side of the same axis; this leaden weight, which is almost a counterbalance to the arm G 2, and its ball I 2, fig. 1, may be made of any shape, so that it be heavy enough, and move freely within the electrometer. At F, fig. 2, is shown a circular piece of brass, fixed within the frame so that the repulsive power, at the top of the leaden weight E, may be as equal as possible, at whatever distance the arm C is repelled. At G, is shown the piece of brass into which the upper end of the wire H, fig. 1, is screwed, it is made fast to the inside of the frame of the instrument with a screw.

(556.) "Fig. 3. shows the internal frame of the electrometer, to which all the parts are fixed and supported by screws, &c. Fig. 4. shows the inside of the electrometer in profile. The brass rim A, which holds the glass in the front face of the instrument, is kept in its place by center pins at





and is held on by the screws *aa*. The part *B*, which brings the dial plate forward from the frame towards the glass, is held on by the screws *bb*. The axis of the wheel of 12 teeth passes through the dial plate on *B*, and receives the index *k*; the other end of the axis is pointed, and works in the bent arm *d*, which is screwed to the frame at *c*. One end of the axis of the wheel of 48 teeth is pointed, and works in the frame; the other end is supported by, and works in, the bent arm *g*, which is screwed to the frame at *b*; but to lessen the friction at *i*, in the bent arm *g*, a screw passes through it; this screw is perforated, as at *fig. 10*, by this means, such exactness in the length of the arm *g*, is unnecessary, the screw itself being perforated with a larger hole till very near the little end of it, which is bevelled off, and the remaining part of the hole being made very small, the friction is considerably diminished. The joinings of the weight *E*, and the arm *C*, are shewn here, the same as in *fig. 2*. The part *D*, which brings the dial plate on the back of the electrometer towards the glass, rests in the rabbet of the frame, it rises half the depth of the rabbet. The brass *F*, which holds the other glass, rests in the rabbet of the frame, fills up the other half of the rabbet, and is held on by a bent pin, as at *one side*, and by a spring catch *p*, on the other side; this bent pin, and the spring catch, through two holes (under, or behind the ball *F*.) made for that purpose in the part *D*. The axis of the wheel of 48 teeth passes through the dial plate *D*, and carries the index *m* a quarter, or 90° of a circle, which may be graduated according to the face on the front of the electrometer.

(557.) "Fig. 5, represents the electrometer turned its bottom upward, to shew the opening, where the arm *G 2*, *fig. 1*, moves up and down, and the hole through which goes the upper end of the wire *H*, *fig. 1*, and screws into *G*, *fig. 2*. The catch *p*, which is shewn in *fig. 4*, is fixed to the frame, close to the opening in *fig. 5*, that it may be opened easily with the point of an awl, or the like. Fig. 6, 7, 8, 11, shew the mechanism of the movements and parts in the ball *F*, *fig. 1*. Fig. 8, shews the external construction of the ball *F*, *fig. 1*, which is hollow, and consists of a frame, *fig. 7*, in the middle, with two caps screwed on to the rim, one on each side; it has a hole at top and bottom, through which goes the bent wire *H*, *fig. 1*. Within this ball is another leaden weight, which is a counterbalance to the arm *G 1*, *fig. 1*. The innermost circle in *fig. 8*, represents the outline of the weight in the ball *F*, *fig. 1*. The position of this weight is seen at *g*, *fig. 6*, and *fig. 7*; a hole is made perpendicularly through the middle of it, to give liberty for it to move up and down, free of the wire *H*, *fig. 1*, which passes through this weight.

(558.) "Fig. 11, shews a piece of brass, a little thicker than a new shilling, which is held to the inside of the rim, *fig. 8*, by the screws *aa*, *fig. 6*, with its hole in the middle, against the hole in the rim *fig. 8*, in which the arm *G 1*, *fig. 1*, moves a little way up and down, as shewn in *fig. 6*. The ends *bb*, *fig. 11*, are turned up as at *bb*, *fig. 7*,

to form a supporter for the axis on which the arm *G 1*, *fig. 1*, with its weight *g*, *fig. 7*, rests. *aa*, *fig. 11*, shew the holes, through which go the screws *aa*, *fig. 6*. This weight is made fast to the axis on which it is supported; but the arm *G 1*, *fig. 1*, screws in and out as at *c*, *fig. 6*. Fig. 12, shews the part at *z*, *fig. 1*, that screws into the ball *F*, to support the arm *g*, and its ball *r*: this piece (which is hollowed out on the side next the wire *H*, to fit it,) is screwed in, so as to press against the wire *H*, and serves as a spring to keep the ball *F* steady; which is made to slide up and down, as well as to turn round on *H*, to whatever position may be wanted.

(559.) "In order that the divisions, before mentioned, on the arm *G 1*, *fig. 1*, may be made exactly a grain each, first slide the weight *n*, towards the ball *F*, till it is an exact counterbalance to the weight in *F*; then at one end of the weight *n*, make a mark on the arm *G 1*, and there let the divisions and numbering begin. Suspend any tolerably good pair of scales, so that the bottom of one of them may rest upon the ball *r*, between *r* and *I 1*, (the ball *I 1*, resting in the scale) slide the weight *n*, near to the ball *I 1*, put as many grains into the other scale, as will just raise the scale with the ball *I 1*, in it; then mark the arm at the same end of the weight *n*, and divide the space between the two marks, into as many equal parts as there are grains in the scale; each part will then be equal to one grain: each part may also be divided and subdivided into halves and quarters.

(560.) "The arm *G 2*, *fig. 1*, being repelled, shews when the charge is increasing, &c. and the arm *I 1*, with its weight *n*, tells what such repulsive power is between two balls of the size of these, in grains, according to the number of divisions, at which the weight *n*, on the arm *G 1*, rests, when it is lifted up. The weight *n*, by repeated trials, having been put at different places, such respective number of grains may then be marked on the lesser circle on the dial-plate, to which the shortest end of the index *K*, *fig. 1*, reaches, and where it points at: so that when the grains are all marked on the dial plate, thus ascertained by the arm *G 1*, all these parts of the instrument, that is, the ball *F*, with the arms *G 1*, and *g*, may be taken away, and the remaining part of the electrometer, may be used without them: but I do not know how the grains can be so exactly marked and ascertained on the dial-plate, as by these parts being on the instrument. And, notwithstanding these parts may be taken off, and the electrometer used without them, yet I think it is most safe and certain, to use it with them altogether, as they are a check one upon the other: for I find various circumstances will occur, by which the arm, *G 2*, alone is more liable to vary at different times, than when the other parts are on: the atmospheres of different things, or the atmosphere of the arm and its ball, intermingling with other things, or any small piece of lint, or other fibrous substances, lighting on the ball, will make it vary very much, according to the place it may, by chance, adhere to: but, as before observed, when they are all together they check each other. I believe the arm *G 2*, alone, would be equally

equally certain, if all imperceptible atoms, &c. could be got rid of, which are constantly floating about in the air of most rooms.

(561.) "I do not mean to confine the number of grains, or divisions on the arm G 1: but my own observations rather lead me to think, that no glass to be charged, as it is called, with electricity, will bear a greater charge than that whose repulsive force, between two balls of the size of these, is equal to 60 grains weight, before it will be perforated, or struck through. Nay, I have not found many instances when it would bear or support itself with 50 grains; and I think it very hazardous to charge higher than 45 grains. I think, likewise, that the size of these balls and wires are large enough to prevent the escape, or dispersing of the charge of electricity, which any glass will bear, that we are acquainted with; but if balls, wires, or arms, of this size are found too small, larger may be made on the same plan.

(562.) "After this manner, with the electrometer above described, by knowing the quantity of coated surface, and the diameter of the balls, one may say, a certain quantity of coated surface of glass, charged to any given number of grains, expressing the repulsive force, between two balls of a certain diameter, will melt a wire of a certain size, kill this or that animal, and the like.

(563.) "In respect to the uses and advantages of this electrometer, perhaps I may not know them all, and left partiality may prejudice me in behalf of my own contrivance, I would rather leave them to the judgment of others: my opinion however is, that all others, which I have seen or heard of, are such as speak no intelligible language, and that this speaks so as to be understood universally: for unless the repulsive power of the charge of different glasses be very different, this electrometer, or any other electrometer, made after this manner, must, I should presume, speak very nearly the same language; it being known how much coated surface there is, and the size of the balls; but if the size of the balls be not the same, the language the electrometer speaks will be very different.

(564.) "Although other electrometers shewed a greater or less charge, or power, by an arm being repelled to a greater or less distance, or by striking at different distances; yet, the power of the charge, was not in any manner ascertained; we could say, that the arm, or the index, was repelled to such a number of degrees of a circle, or that it struck at a certain distance; but the repulsive power of a charge to repel the index so much, or so many degrees of a circle; or the strength of the charge to strike at such a distance, was not, that I know of, in any manner intelligibly ascertained: this does it by the weight that the repulsive power has to lift up in grains, &c. which weight is to be proved by any good pair of scales and weights; and I know not of any method that has yet been tried to shew the different strength of charges, so satisfactory as by that of their repulsive force.

(565.) "All the necessary parts of the electrometer being made of metal and glass that is pretty stout, I think that the electricity is considerably less liable to escape than by wood, &c. I have

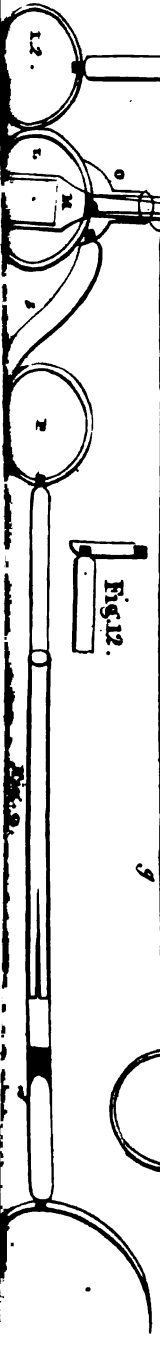
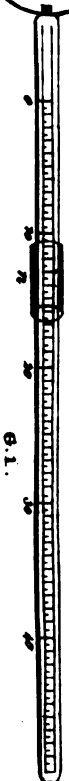
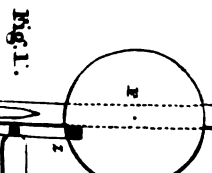
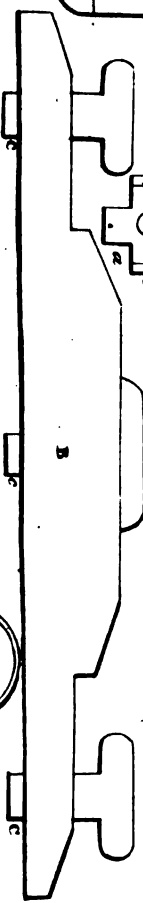
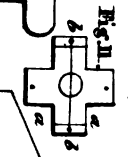
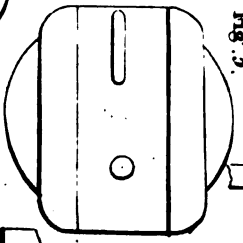
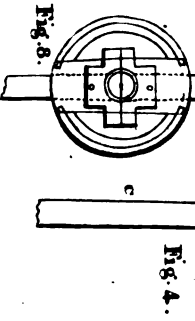
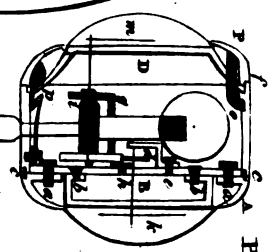
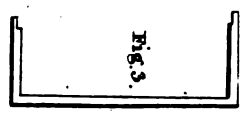
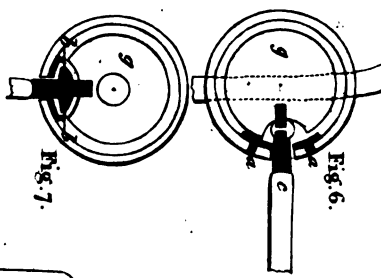
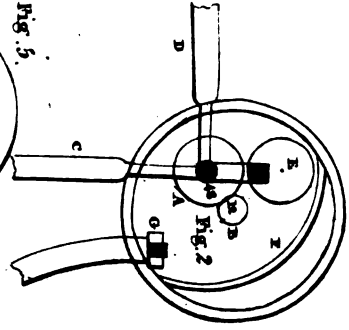
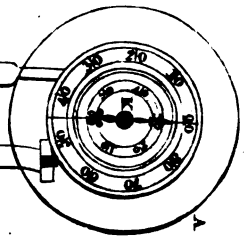
tried reeds, on account of their being light, and covered them with tin foil, or gilded them, to make them good conductors, but have so frequently found inconveniences from them by points rising up, the celerity of moving, and the different weight of them at different times, owing to moisture, changes of the weather, and the like that I have laid them all aside, and find my present instrument as free from these inconveniences as could expect; nor is it liable to be out of order if proper care be taken of it.

(566.) "Another use of this electrometer is, to graduate other electrometers; I mean such as Nairne's, which I think is a very good improvement of Mr Lane's electrometer; and I think have rather improved Mr Nairne's, by a little alteration in the construction of it, and graduated it, so as to be always certain; and it may be applied to any prime conductor, &c. but unless be first graduated, that the strength of the charge may be ascertained by the distance it is to find at, it is of no more use than Mr Nairne's; except that it is applicable to any thing, or almost anywhere: yet, after all this alteration, it will not shew when a charge is increasing or decreasing, nor how far off, or how near a discharge is, only tell what it is, at the time that the discharge is made."

(567.) *Fig. 3 & 4, Plate CXXXI*, represent an electrometer, or rather two, nearly similar to Brook's. These two instruments are used either conjoined or separately. The arms FH & K, when used, are placed as much as possible out of the atmosphere of a jar, battery, prime conductor, &c. The arm FH and the ball K are made of copper, and as light as possible. The divisions on the arm FH are each exactly a grain. They are ascertained at first by placing grain weights on a brass ball which is within the ball L; (this is an exact counterbalance to the arm FH and ball K, when the small slide on this arm is at the first division,) and then removing the slide till together with the ball K, counterbalances the ball L and the weight laid on it. *A, fig. 3*, is a plate, divided into 90 equal parts. The index of this plate is carried once round, when the arm BC has moved through 90°, or a quarter of a circle. That motion is given to the index by the repulsive power of the charge acting between the ball D and the ball B. (*Phil. Trans.* vol. lxxxii, 384.) The arm BC being repelled, shows what the charge is increasing, and the arm FH shows what this repulsive power is, between two balls of this size, in grains, according to the number the weight rests at, when lifted up by the repulsive power of the charge: at the same time the arm BC points out the number of degrees to which the ball B is repelled; so that, by repeated trials the number of degrees, answering to a given number of grains, may be ascertained, and a table formed from these experiments, by which the electrometer, *fig. 3*, may be used without that of *fig. 4*.

(568.) Mr Brook has also made a great improvement on Mr Nairne's electrometer, of which he gives the following description:—

(569.) "Although (says he) the electrometer described in *Pl. CXXXI & CXXXII*, has the advantage



tages and uses already mentioned, yet, it will never make the discharge of a jar, or battery, of itself, for which Mr Nairne's is very excellent: and in the state to which I have altered it, I think it is exceedingly useful with the former one; thus, the progress of a charge is shewn by the motion of the arm G 1, of the former; the distance it is repelled shews how far off, or how near, a discharge of any required strength is; the arm G 1, will shew that the repulsive power is what it was designed to be; and the latter, will make the discharge as soon as the charge has acquired the strength proposed: which I have proved.

(570.) *Plate CXXXI, fig. 5,* "shews this last mentioned electrometer in its improved state. A, is a solid piece of glass bent to a right angle at both ends; one end of it goes into a socket cut in the ball B, which is of solid metal, to one side of which is made fast a short conical tube of tin. The prime conductor has likewise a conical tube, or socket, fixed in the side or end of it, to receive the conical tube fixed to the ball B: they are made conical that they may stand steady. The other end of the glass A, goes into the socket of wood C, at the end of which is a ball; through this ball goes the graduated wire D, one end of which terminates in a ring or with a ball: the other end has another ball on it, equal in size to the ball B, both of which are the size of the ball of the electrometer described in *Pl. CXXXI and CXXXII*. The socket cut in the ball B, being concentric to the ball itself, the glass A, will sit about in it; still the ball on the graduated wire, D, will always be at the same distance from the ball B.

(571.) "Notwithstanding all the improvements and alterations that have been made on Mr Lane's electrometer, both as to acquiring charges of exactly the same strength with the same quantity of coated surface, and as answering the end, or use, of a discharging rod, still, with respect to the latter, it is chiefly useful, when the charges are not very high, nor a great quantity of coated surface; many brown particles (constantly and almost imperceptibly floating in the air of a room) being so apt to be attracted by, and adhere between, the balls of the electrometer; and the electric atmosphere extending, so strongly, much farther than the distance of these two balls; so that, in both these cases, the charge is very liable to be diminished, almost imperceptibly, whilst the battery is charging. Therefore, with large batteries, highly charged, a discharging rod, or a contrivance for that purpose, is much better by itself, entirely detached from the machine, or the prime conductor; and in such a manner, that it may always approach the place where the discharge is to be made, with the same velocity, and at a certain distance. For this purpose, it is easily made to do its office either with a spring, or a weight, fixed to one end of a wire, and a light ball at the other end of it, with a spring catch, to be made to let go its hold, when the discharge of a battery is wanted. Such an one is adapted to the present machine, and is fixed, by a clamp-iron and screw, upon the table on which the electrical apparatus is placed, at the distance of about 16 or 18 inches from the place where the discharge is to be made, so that no part

of it be so near to any part of the apparatus that is electrified, as to steal away, or disperse any part of the charge. The spring-catch is let loose by a stick of glass in the hand, so that there is no danger of being affected by the stroke.

(572.) *Plate CXXXI, fig. 6,* "shews this piece of apparatus, or fixed discharging rod. A, is the foot of it. B, is a strong piece of glass, fixed in a wooden socket, which screws into the foot A, to insulate the upper part of it. C is a cap of box-wood, with a socket in it to be put upon the top of the insulating glass B, equal in height to the prime conductor of the machine. D is a piece of stout wire, bent to a right angle, which goes through a hole in the cap C, and turns freely in it. The wire, E, with its ball at one end, is screwed into the end of the stout wire D; the wire E, together with its ball, is about 16 inches long. The wire, F, has a ball of lead fixed to one end of it, the other end is fixed to the end of the stout wire D; at the back of the cap C, nearly at a right angle with the wire E. Towards the lower part of the cap C, is fixed to it the spring-catch a, which has a hole in it at b; the wire, D, has a pin fixed in it at c, which projects a little way out at the back part of it, so as that when the wire E, is put perpendicular, the wire F, will be nearly horizontal, and the pin in D, will catch into the hole at b, in the spring catch a. When the spring, a, is pressed back, the pin, c, will let go its hold, and the ball on the wire F, falling downwards, will throw the arm, or wire E, upwards, so as to pass by the prime conductor, or any other part where the discharge is designed to be made, at a certain distance from it, and make the discharge of a battery, &c. At d, is a wire, one end of which goes into the cap C, far enough for the stout wire D, to rest upon it as it turns, on making the discharge, in order to make the metallic communication complete through the cap C: the other end terminates in a ring: through this ring goes the wire G, with the ball on its upper end resting upon the ring, and moves freely in it: on to the lower end of the wire G, is screwed one of the screw forceps, which receives one end of a wire, that is to be tried what force, or charge, it will bear before it will be melted, or destroyed.

(573.) "Fig. 7. is a lump of lead, which is put any where upon the metallic covering on which the bottles of the battery stand: a hole is made in the lump of lead to receive one end of a wire, to the other end of which, is screwed the other screw forceps, which holds the other end of a wire, as the former.

(574.) "Fig. 8. is a piece of glass fixed into a wooden handle, to press back and disengage the spring-catch before mentioned."

(575.) The infinite variety that takes place in the electricity of the ATMOSPHERE requires the most delicate instruments to observe its minutiae. Mr Cavallo has invented several electrometers for this purpose; particularly a pocket electrometer, which may be very conveniently used, when the atmospheric electricity is collected in any quantity. It is represented on *Plate CXXX, fig. 16 and 17*. The case or handle of this electrometer is formed by a glass tube about 3 inches long and three eighths of an inch in diameter, half of which is covered

with sealing wax. From one extremity of this tube, viz. that without sealing wax, a small loop of silk proceeds, which serves occasionally to hang the electrometer on a pin, &c. To the other extremity of the tube a cork is adapted, which, being cut tapering on both ends, can fit the mouth of the tube with either end. From one extremity of this cork two linen threads proceed, a little shorter than the length of the tube, suspending each a little cone of pith eld. When this electrometer is to be used, that end of the cork which is opposite to the threads is pushed into the mouth of the tube; then the tube forms the insulated handle of the pith electrometer, as represented *fig. 16*. But when the electrometer is to be carried in the pocket, then the threads are put into the tube, and the cork stops it, as represented *fig. 17*. The peculiar advantages of this electrometer are, its convenient small size, its great sensibility, and its continuing longer in good order than any other. *Fig. 18*, represents a case to carry the above described electrometer in. This case is like a common toothpick case, except that it hath a piece of amber fixed on one extremity A, which may occasionally serve to electrify the electrometer negatively; and on the other extremity it hath a piece of ivory fastened upon a piece of amber BC. This amber BC serves only to insulate the ivory; which when insulated, and rubbed against woollen cloths, acquires a positive electricity, and is therefore useful to electrify the electrometer positively.

(576.) Mr CAVALLO has also invented another portable atmospheric electrometer, represented in *fig. 19*. Its principal part is a glass tube, CDMN, cemented at the bottom into the brass piece AB, by which part the instrument is to be held when used for the atmosphere; and it also serves to screw the instrument into its brass case, ABC; *fig. 20*. The upper part of the tube CDMN is shaped tapering to a small extremity, which is entirely covered with sealing wax; to this tapering part a small tube is cemented; the lower extremity being also covered with sealing wax, projects a short way within the tube CDMN; into this smaller tube a wire is cemented, which with its under extremity touches the flat piece of ivory H, fastened to the tube by means of a cork; the upper extremity of the wire projects about a quarter of an inch above the tube, and screws into the brass cap EF, which cap is open at the bottom, and serves to defend the waxed part of the instrument from the rain, &c.

(577.) A section of the brass cap is represented in *fig. 21*, to shew its internal structure, with the manner in which it is screwed to the wire projecting above the small tube L. This small tube and the upper extremity of the large tube, CDMN, appear like one continued piece when joined, from the sealing wax covering them both. The conical corks, P, *fig. 19*, which shew the electricity by their repulsion, are made very small, and suspended by very fine silver wires, shaped like rings at the top, by which they hang very loosely on the flat piece of ivory H, which has two holes in it. By this method of suspension, which, Mr Cavallo says, is applicable to every sort of electrometer, the friction is reduced to nothing almost, and the

instrument is thus rendered sensible to a very small degree of electricity.

(578.) IM and KN are two narrow slips of tin foil, stuck to the inside of the glass CDMN, and communicating with the brass bottom AB. They serve to convey that electricity which, when the balls touch the glass, is communicated to it, and being accumulated, might disturb the free motion of the balls.

(579.) To use this instrument for artificial electricity, electrify the brass cap EF, by an electric substance, and the divergence or convergence of the balls of the electrometer, at the approach of an excited electric, will show the quality of the electricity. The best manner to electrify this instrument is, to bring excited wax so near the cap that one or both of the corks may touch the top of the bottle CDMN, after which they will collapse and appear unelectrified. On removing the wax, they will again diverge, and remain electrified positively.

(580.) To try the electricity of the fog, clouds, &c. by this electrometer, the electrometer has only to unscrew it from its case, and hold by the bottom AB, to present it to the air a little above his head, so that he may conveniently see the balls P, which will immediately diverge, if there is any electricity; i. e. whether positive or negative may be ascertained, by bringing an excited piece of sealing wax, or other electric, towards the cap EF.

(581.) M. SAUSSURE has made an improvement on the electrometer. The principal circumstances in which M. Saussure's electrometer differs from Mr Cavallo's, are, 1. The fine wires, by which the balls are suspended, should not be long enough to reach the tin foil which is pasted on the inside of the glass; because the electricity, when first it will cause them to touch this tin foil twice consecutively, and thus deprive them in a moment of their electricity. To prevent this defect, and give them a sufficient degree of motion, it is necessary to use larger glasses than those that are generally applied to Mr Cavallo's electrometer; 3 inches diameter will answer the purpose well. But as it is necessary to carry off the electricity, which may be communicated to the inside of the glass, and thus be confounded with that which belongs to those substances that are under examination; four pieces of tin foil should be pasted on the inside of the glass; the balls should not be more than one 20th of an inch diameter, suspended by silver wires, moving freely in the glass, nicely rounded. The bottom of the electrometer should be of metal; for this renders it more easy to deprive them of any acquired electricity, touching the bottom and top at the same time.

(582.) This electrometer may be used instead of the condenser of M. VOLTA, by only placing it on a piece of oiled silk, somewhat larger than the base of the instrument: but in this case it is necessary that the base and not the top of the instrument, which must be brought into contact with the substance whose electricity is to be explored. By this instrument, it is easy to ascertain the degree of conducting power in any substance. If it is placed on an imperfect conductor, as dry wood or

ble, and if the instrument is electrified strongly, and afterwards the top is touched, the electricity will appear to be destroyed; but on lifting up the instrument by the top, the balls will again open, because the imperfect conductor formed with the top is a kind of electrophorus, by which the electric fluid was condensed, and lost its tension, till the perfect conductor was separated from the imperfect one; whereas, if the conductor had been perfect, it would have been deprived of its electricity immediately on the application of the hand. It is useful to discover also the electricity of any substance, as of clothes, hair of different animals, &c. For this purpose it must be held by the base, and the substance rubbed briskly (only once) by the ball of the electrometer; the kind of electricity may be ascertained in the usual manner. As the top of the electrometer acts in this case as an insulated rubber, the electricity it acquires is always contrary to that of the rubbed body.

(83.) To collect a great quantity of electricity in the air, this electrometer is furnished with painted wire 15 inches or two feet long, which is drawn in 3 or 4 pieces, to render the instrument more portable, see fig. 12. When it rains, the small cover, fig. 23, is to be screwed on the top of the instrument, as by this its insulation is preserved, notwithstanding the rain. This does not only the electricity of fogs, but also of serene weather, and enables us to discover the kind of electricity which reigns in the atmosphere; and to a certain degree to form an estimate of its quantity, and that under two different points of view, the degree of intensity, and the place from the earth at which it first begins to be sensible. A conductor exhibits signs of electricity only when the electric fluid is more or less condensed in the air than in the earth. Though air resists the passage of the electric fluid, it is not absolutely impermeable to it; it suffers it to pass gradually, and generally with more ease in proportion as its mass is less. It is therefore necessary to discover at what height it is necessary to be elevated, in order to find a sensible difference between the electricity of the earth and that of the air. A very sensible difference may be usually discovered by this instrument at the distance of 4 or 5 feet from the ground; sometimes may be seen if the instrument is placed even in the ground, while at others it must be raised 7 or 8 feet before the balls will open; sometimes, though seldom, this height is not sufficient. This difference is generally greatest when the electricity is strongest, though necessarily modified by a variety of circumstances, some of which are known, the degree of the dryness or humidity of the air, and the others are unknown.

(84.) To discover the degree of intensity, at a given height, raise the electrometer, and judge of the divisions which are placed on the edge of the degree of their divergence. To find the relation between this degree of divergence and the force of electricity, M. Sauffure took the following method: As he could not with certainty divide or triple a given quantity of electricity; he as a given force may be reduced one half, a fourth, or an 8th, &c. by dividing between two

equal and similar bodies, the electricity contained in one; he took two of his unarmed electrometers, which were as similar as possible, and electrified one of them, so that the balls separated precisely 6 lines: he then touched the top thereof by the top of that which was not electrified; in an instant the electricity was equally divided between them, as was evident by the divergence of the balls, which was 4 lines in each; consequently, a diminution of half the density had only lessened the divergence one 3d. One of these electrometers was then deprived of its electricity, and was afterwards brought in contact with the other, as before; the remaining electricity divided itself again between them, and the balls fell from 4 to 2 lines, nearly in the same proportion as before; in the third operation they fell to 19; in the 4th to one, where he was obliged to stop, as there was not now sufficient force in the fluid to pass from one electrometer to the other, and distribute itself uniformly between them. The same experiment repeated several times gave very nearly the same results. Negative electricity decreased also in the same proportion as the positive. A table has been constructed on these principles, giving a general though not exact idea of the increase in force, which corresponds to different degrees of divergence in the balls calculated to every 4th of a line.

(85.) Similar electrometers might be constructed upon a larger scale, and with heavier balls, which would only separate one line, with the degree of electricity that makes the smaller ones diverge 6 lines; these would consequently measure a force 10 or 14 times greater than that which forms the unity of the above mentioned table; and thus we might perhaps be enabled to discover the ratio of the strongest discharge of a great battery, or perhaps even of thunder itself, to that of a piece of amber, which only attracts a bit of straw or any other light substance,

(86.) To observe the electricity of the atmosphere with this instrument, we must first bring the electric fluid contained in the electrometer to the same degree of density with that at the surface of the earth; this is easily done by letting the bottom and top touch the ground at the same time; then raise the point, keeping the bottom still in contact with the ground; from whence it may be lifted up in a vertical position till the balls are level with the eye. We must next render the divergence of the balls, which is occasioned by the electricity of the air, permanent. This is effected by touching the top of the electrometer with the finger: but here the acquired electricity becomes contrary to that of the body by which they are electrified. Suppose, e. g. the electrometer to be 5 feet from the ground, and the balls diverging; touch the top of the electrometer with the finger, and the balls will close; but they will again open if the electrometer be withdrawn from the influence of the electricity of the air, by being brought nearer the ground, or into the house. M. Sauffure only employed this method when the electricity was so weak that he could not perceive any until the electrometer was raised considerably above his eye: as in this case he could not per-

ceive the divergence of the balls, he always endeavoured to obtain a permanent electricity in the foregoing manner.

(587.) To know whether the balls separate with positive or negative electricity, bring a piece of excited wax gradually near the top of the electrometer; if the balls separate further on the approach of the wax, they are negatively electrified, or of the same nature with the electricity of the wax; if on the other hand they come nearer together on the approach of the wax, then the electricity is positive, or in a contrary state to that of the wax. If glass is used, the results will be exactly the reverse of the preceding.

(588.) To illustrate these observations;—choose an open situation free from trees and houses, screw the conductor on the top of the electrometer, lay hold of it by its base, and place it so that the base and conductor may touch the ground at the same time; then elevate it to the height of the eye, and observe the quantity of lines, or 4ths of a line, that the balls have diverged; now lower it till the balls almost touch each other, and observe at what distance the top of the conductor is from the ground: This is the height from the ground at which the electricity of the air begins to be sensible. If the electricity of the air is sufficiently strong to make the balls diverge when it stands upon the ground, one of the lengths of the electrometer must be unscrewed from it. If the balls, however, still diverge, the other parts of the conductor should also be unscrewed, and you may mark down, that the electricity is sensible at zero, or on the surface of the earth. If, on the contrary, the electricity is so weak, as not to cause the balls to diverge when they are even with the eye, and consequently when the conductor is two feet higher, or 7 feet from the ground, you should then raise it a foot higher; while it is thus elevated, touch the top with the other hand; when this hand is taken away, lower the electrometer, and if it is electrified you may say the electricity is sensible at 8 feet; if it is not, raise it as high as the arm can reach, and repeat the same operation; if any electricity is found, write down electricity sensible at 9 feet; if not, mark 0, or no electricity relative to this instrument, and this mode of employing it; for signs of electricity may still be obtained, by throwing a metallic ball 50 or 60 feet into the air, which is at the same time connected with the electrometer by a metallic thread.

(589.) One advantage of this instrument is, that it will often exhibit signs of electricity when none can be obtained from a conductor of 100 feet in height, because it can more easily be preserved from humidity, &c. which destroy the insulation of the large conductors.

(590.) ATMOSPHERICAL ELECTRICITY varies according to the situation. It is generally strongest in elevated and insulated situations, not to be observed under trees, in streets, in houses, or any inclosed places; though it is sometimes to be found pretty strong on quays and bridges. It is also not so much the absolute height of the places as their situation; thus a projecting angle of a high hill will often exhibit a stronger electricity than the plain at the top of the hill, as there are fewer points than in the former to deprive the air of

its electricity. The intensity of the atmospheric electricity is varied by many circumstances, some of which may be easily accounted for, others with more difficulty. When the weather is not serene, it is impossible to assign any rule for their variation, as no regular correspondence can then be perceived with the different hours of the day, nor with the various modifications of the air. The reason is evident; when contrary and variable winds reign at different heights, when clouds are rolling over clouds, these winds and clouds, which we cannot perceive by any exterior sign, influence however the strata of air in which we make our experiments, and produce these changes of which we only see the result, without being able to assign either the cause or its relation. Thus, in stormy weather, we see the electricity strong, the null, and in a moment after arise to its former force; one instant positive, the next negative without being able to assign any reason for the changes.

(591.) M. SAUSSURE says, that he had observed these changes succeed with such rapidity, that he had not time to note them down. When it falls without a storm, these changes are not so sudden; they are, however, very irregular, particularly with respect to the intensity of force; the quantity thereof is more constant. Rain or almost uniformly gives positive electricity. In cloudy weather, without rain or storms, the electricity follows generally the same laws as in serene weather. Strong winds generally diminish the intensity; they mix together the different strata of the atmosphere, and make them pass successively towards the ground, and thus distribute the electricity uniformly between the earth and the sky. M. Saussure has observed a strong electricity in a strong north wind. The state of the air in which the electricity is strongest, is foggy weather; it is also accompanied with electricity, except when the fog is going to resolve into rain.

(592.) The most interesting observations are those which throw the greatest light upon the various modifications of electricity in our atmosphere are those made in serene weather. In winter, and in serene weather, the electricity is generally weak in an evening, when the dew has fallen, until it begins to rise; its intensity afterwards augments by degrees, sometimes sooner and sometimes later, but generally before noon, it attains a certain maximum, from whence it again declines, till the end of the dew, when it will be sometimes stronger than it had been during the whole day; after which it will again gradually diminish during the whole night; but it is never quite destroyed, if the weather is perfectly serene. Atmospheric electricity seems, therefore, like the sea, to be subject to a flux and reflux, which causes it to increase and diminish twice in 24 hours. The moments of greatest force are some hours after the rising and setting of the sun; those when it is weakest, precede these periods.

(593.) M. SAUSSURE has given an instance of this periodic flux in electricity: On the 22d Febr. 1785, (one of the coldest days ever remembered at Geneva), the hygrometer and thermometer were suspended in the open air on a terrace exposed to the south west; the electrometer, in

its situation, indicated an electricity equal to what it would have shown if it had been placed on an open plain. The height of the barometer was reduced to what it would have been if the mercury had been constantly at the temperature of 15 degrees of Reaumur's thermometer. The place of observation was elevated 60 feet above the level of the lake. The observations of the day preceding and following this great cold were marked down by him. There was a weak S. W. wind during the whole three days; and it is rather remarkable, that most of the great colds, which have been observed at Geneva, were preceded by, or at least accompanied with, a little S. W. breeze. From the first 18 observations made during these three days, when the sky was quite serene, we learn that the electricity was pretty strong at 9 A. M.; that from thence it gradually diminished till towards 6 P. M. which was its first minimum; after which it increased till 8, its second maximum; from whence it again gradually declined till the next morning, which was the time of its second minimum; after which, it again increased till ten in the morning, which was the first maximum of the following day; as this was cloudy, the electric periods were not so regular.

(594.) The electricity of serene weather is much weaker in summer than in winter, which renders it more difficult to observe the gradations in summer than in winter. In general, in summer, if the ground has been dry for some days, and the air dry also, the electricity increases from the rising of the sun till 3 or 4 P. M. when it is strongest; it then diminishes till the dew begins to fall, which again reanimates it; though after this it declines, and is almost extinguished during the night. But the serene days that succeed rainy weather in summer, generally exhibit the same diurnal periods or states of electricity, as are to be observed in winter. The air is invariably positive in serene weather, both in winter and summer, day and night, in sun and in dew. It seems, therefore, that the electricity of the air is essentially positive; and that whenever it appears to be negative, it probably arises from some clouds which have been exposed to the pressure of the electric fluid contained in the upper part of the atmosphere, or to more elevated clouds that have discharged a part of their fluid upon the earth, or upon other clouds.

(595.) To discover the cause of these phenomena, M. SAUSSURE instituted a set of experiments on EVAPORATION, avoiding the use of M. Volta's condenser. To produce a strong evaporation, he threw a mass of red hot iron into a small quantity of water, which was contained in a coffee pot with a large mouth, and suspended by silk strings; by this he obtained a strong positive electricity; though according to M. Volta's system, it ought to have been negative: the experiment was repeated several times, varying some of the circumstances, but the result was always the same. As it was not easy to believe that so able a philosopher as M. Volta should be deceived, it was necessary to try the experiment in a manner more analogous to his method. A small chafing dish was therefore insulated by silk cords, and the coffee-pot, with a small quantity of water, placed on it; one

electrometer was connected with the coffee pot and another with the chafing dish; the fire was raised by a pair of bellows; when the water had boiled strongly for a few minutes, both electrometers exhibited signs of electricity, which on examination, was found to be negative; proving the truth of M. Volta's experiment. The evaporation produced by the effervescence of iron in the vitriolic acid, and by that of chalk in the same acid, gave also negative electricity.

(596.) M. Saussure found it now necessary to inquire, why the vapour, excited by the heated iron, produced positive electricity; while that from boiling water in any other way produced a negative electricity? He suspected, that the intensity of heat to which the water is exposed, by the contact of a body in a state of incandescence, was the cause of the electricity produced by its evaporation; and that a combination was then formed, by which a new quantity of the electric fluid was produced. This conjecture may seem improbable; but the quantity of electricity produced by this experiment will astonish those that repeat it: and this quantity is the more surprising, because, if it is true, according to the system of M. Volta, that the waters absorb, while they are forming a quantity of the electric fluid, there must, therefore, be enough developed in this experiment for the formation of the great quantity of vapours produced by the heated iron, and afterwards a sufficient quantity to electrify strongly the apparatus, and all these vapours. This experiment shows clearly the cause of that prodigious quantity of electricity which is unfolded in the eruption of volcanos; as it is probable that the water in these acquires a much greater degree of heat than is given to it in our experiments.

(597.) To verify this conjecture, that it was in some measure the combustion of the water or the iron that produced the positive electricity, he tried whether, by a regular moderation of the heat of the iron, positive electricity would always be obtained. A large iron crucible, 5 inches high, 4 in diameter, and 6 lines thick, was heated red hot, then insulated; after which, small quantities of water were thrown into it, each projection of the water cooling more and more the crucible; thus descending by degrees till there was only sufficient heat to boil the water; carefully observing, and then destroying, the electricity produced at each projection. The electricity was always positive or null; at the first projections it was very strong; it gradually diminished to the 12th, when it was scarce sensible, though always with a tendency to be positive. On repeating this experiment, and varying it in different ways, a remarkable circumstance was observed: When a small quantity of water was thrown into the crucible, the moment it was taken from the fire, while it was of a pale red, approaching what is called the *white heat*, no electricity was obtained. This fact seemed to have some connection with another mentioned by Musschenbroek, that water evaporates more slowly on a metal, or any other incandescent body, than on the same body, heated only a small degree above boiling water.

(598.) To examine this relation, and to find whether there was any between the periods of e-

vaporation and the production of electricity, M. Saussure made many experiments, which are accurately described in his work; but of which our room permits us only to give the results. His apparatus consisted of a pot of clay, well annealed, 15 lines thick and 4 inches diameter; this was insulated by a dry glass goblet; upon this pot was placed the crucible, or any other heated substance on which the water was to be thrown, in order to be reduced into vapour; the crucible was contiguous to a wire connected with an electrometer; a measure, containing 54 grains of distilled water, was thrown upon the heated crucible: the time employed in the evaporation was observed by a second watch; the electricity produced was noted. When this measure of water was reduced into vapour, the electricity of the apparatus was destroyed, and a fresh measure of water thrown into the crucible, proceeding in the same manner till the crucible was almost cold.

(599.) The 1st experiment was with an iron crucible, from which it was found that Musschenbroek was not right in saying that the evaporation was slowest when the iron was hottest; for at the instant it was taken from the fire, it required 19 seconds to evaporate the water, and took more time till the 3d projection, when it took 35 seconds, though from that period it employed less time. The electricity was at first 0, then positive, afterwards negative, then 0, and afterwards positive to the end of the experiment. The vapour was not visible till the 7th projection. In the 2d experiment with the same crucible, though every endeavour was made in order to render them as similar as possible, the electricity was constantly positive. The 3d experiment was with a copper crucible; here also the electricity was positive; and the longest time employed in evaporation was not the instant of the greatest heat. It was very curious to see the water endeavouring to gather itself into a globule, like mercury on glass, to be sometimes immovable, and then to turn on itself horizontally, with great rapidity; sometimes throwing from some of its points a little jet, accompanied with an hissing noise. The 4th was with the same crucible: the electricity was at first negative, then constantly positive. The 5th was with a crucible of pure silver: a considerable time was employed here in evaporating the same quantity of water; even in the instant of the greatest heat it took 5 minutes 6 seconds; the electricity was weak; three times no electricity was perceived; five times negative electricity was discovered. In a 6th experiment with the same crucible, a positive electricity was obtained at the 2d projection, after which none of any kind was perceived. The 7th, with the same, gave at first a strong negative electricity; the 2d and 3d projection gave a weak positive electricity. The 8th was made with a porcelain cup: here the evaporation was slower at the second than the first projection; but from this it took longer time till it was cold, contrary to what happened with the metals; the electricity was always negative. The 9th and 10th experiments with the same cup produced similar effects. The 11th was with spirits of wine in a silver crucible: there was no electri-

city produced at the two first projections, and what was afterwards obtained was negative. The 12th was with ether: here the electricity was also negative.

(600.) These two inflammable fluids, in evaporating, followed the same laws as water, being dissipated at first most rapidly in the greatest heat, afterwards taking a longer and longer time before they were evaporated to a certain period; then employing less time, or evaporating quicker, till the crucible was nearly cold. Now as china and silver always produced negative electricity, while iron and copper have generally given positive electricity, we may conclude, that electricity is positive with those bodies that are capable of decomposing water, or of being decomposed themselves by their contact with the water; and negative with those which are not at all decomposed or altered.

(601.) Hence M. Saussure conjectures, that the electric fluid may be considered as formed by the union of fire with some unknown principle, perhaps a fluid analogous to inflammable air, but exceedingly more subtle. This analogy seems to him sufficiently proved by the inflammation of the electric fluid, and by the diminution of the air in which this inflammation is made. According to this system, when the operation, which converts water into vapour, produces at the same time a decomposition, it then generates the electric fluid. A part of this fluid combines immediately with these vapours, and serves even to form them. The vessel in which this operation is performed, will acquire a positive electricity, not at all, or a negative, according as the quantity of the fluid generated is superior, equal, or inferior to that which the formation of the vapour consumes. When no decomposition accompanies the evaporation, the electricity ought to be constantly negative, because there is nothing to replace the quantity of this fluid which is employed in forming the vapour.

(602.) If those substances which were susceptible of calcination had, in the above experiment, always given a positive electricity, and those which do not calcine, constantly the negative, every thing would have been explained by these principles; but the phenomena have not always followed the law. Iron and copper sometimes give a negative electricity, and silver the positive. The first can be easily accounted for; iron and copper readily calcine in a brisk fire, and become covered with a scaly crust, which is not susceptible of any further alteration with the same heat. If the bottom of the crucible acquires this crusty coating, the drop of water placed thereon will be no longer in contact with a calcinable substance; there will be no farther decomposition, no generation of the electric fluid: the vapours, however, which are still formed, will absorb a part of the fluid naturally contained in the apparatus, and this will therefore be electrified negatively. It is not so easy to explain why silver gives sometimes a positive electricity, but by supposing it to have been mixed with copper or some substance capable of calcination; and this the more, as the white porcelain always gave negative electricity. This supposition

position was verified by some subsequent experiments, in which the same silver, when purified, always gave a negative electricity.

(603.) Of all the instruments used for measuring electricity, none have answered the purpose better than that invented by Mr BENNET, of which an account is given in the 77th vol. of the *Philos. Trans.* and which is represented fig. 9. PL. CXXXI. It consists of two slips of leaf gold, *aa*, suspended in a glass cylinder B. The foot *e* may be made of wood or metal, and the cap *d* of metal; the latter being made flat at top, for the convenience of putting any thing upon it that is to be electrified. The cap is about an inch wider than the diameter of the glass, and its rim about $\frac{1}{2}$ of an inch broad, hanging parallel to the glass to keep it sufficiently insulated, and to turn off the rain. Within this is another circular rim about half as broad as the former, lined with silk or velvet, so that it may be made to fit the outside of the glass easily, while the cap may be easily taken off, to repair any accident happening to the gold leaf. From the centre of the cap hangs a tin tube *c*, somewhat longer than the depth of the inner rim, in which a small peg *f* is placed, which may be taken out occasionally. To this peg, which is loaded at one end and flat at the other, two slips of leaf gold are fastened with paste, gum-water, or varnish. These are about a fifth part of an inch broad, and two inches long, tapering to a sharp point. In one side of the cap is a small tube to place wires in: *bb* are two long pieces of tin foil fastened with varnish on opposite sides of the internal surface of the glass, where the leaf gold may be expected to strike, and in connection with the foot. The upper end of the glass is covered and lined with sealing wax as low as the outermost rim, to make the insulation more perfect. An improvement on this electrometer is to make the cylinder pretty long, and to have a small additional tube of gum-lac on the end of it. The slips of tin foil reach almost to the edge of the outer rim, and are sharp-pointed at top; widening in the middle, and decreasing in breadth again as they descend.

(604.) The sensibility of this electrometer is extreme, as appears from the following experiments: 1. On putting powdered chalk into a pair of bellows, and blowing it upon the cap, the latter was electrified positively when the nozzle of the bellows was about six inches from it; but at the distance of 3 feet from the nozzle, the same stream electrified it negatively. Thus it appears that the electricity may be changed from positive to negative from the mere circumstance of the wider diffusion of this stream of chalk in the air. It may also be changed by placing a bunch of fine wire, silk, or feathers, in the nozzle of the bellows; and it is likewise negative when blown from a pair of bellows without their iron pipe, so that it may come out in a larger stream. This last experiment was found to answer best in wet weather. There is likewise a remarkable difference between the experiment in which the electricity is positive, and that in which it is negative; the former being communicated with some degree of permanency to the cap, so that the gold leaf continues for some time to diverge; but the latter being only

momentary, and the gold leaf collapsing as soon as the cloud of chalk is dispersed. The reason why the former continues is, that the chalk sticks to the cap. II. A piece of chalk drawn over a brush, or powdered chalk put into the brush, and projected upon the cap, electrifies it negatively; but its electricity is not communicated. III. Powdered chalk blown with the mouth or bellows from a metal plate placed upon the cap, electrifies it permanently positive. If the chalk is blown from the plate, either insulated or not, so that the powder may pass over the cap, if not too far off, it is also positive. If a brush is placed upon the cap, and a piece of chalk drawn over it, when the hand is withdrawn, the leaf gold gradually opens with positive electricity as the cloud of chalk disperses. IV. Powdered chalk falling from one plate to another placed upon the instrument, electrifies it negatively.

(605.) Other methods of producing electricity with chalk and other powders have been tried; as projecting chalk from a goose wing, chalking the edges of books and clapping the book suddenly together, and sifting the powder upon the cap; all which electrified it negatively: but the instrument being placed in a dusty road, and the dust struck up with a stick near it, electrified it positively. Breaking the glass *tear* upon a book electrified it negatively, but when broken in water it did not electrify it. Wheat flour and red lead are strongly negative in all cases where the chalk is positive. The following powders were like chalk: red ochre and yellow rosin, coal ashes, powdered crocus metallorum, aurum musaicum, black lead, lampblack (which was only sensible in the two first methods), powdered quick-lime, amber, lapis calaminaris, Spanish brown, powdered sulphur, flower of sulphur, iron filings, rust of iron, sand. Rosin and chalk, separately alike, were changed by mixture; this was often tried in dry weather, but did not succeed in damp: white lead also sometimes produced positive and sometimes negative electricity when blown from a plate. If a metal cup be placed upon the cap with a red-hot coal in it, a spoonful of water thrown in electrifies the cap negatively; and if a bent wire be placed in the cap, with a piece of paper fastened to it to increase its surface, the positive electricity of the ascending vapour may be tried by introducing the paper into it. The electrification of fogs and rain seems to be well illustrated by pouring water through an insulated cullender, containing hot coals, where the ascending vapour is positive and falling drops negative.

(606.) The sensibility of this electrometer is considerably augmented by placing a candle upon the cap. A cloud of chalk, which in the other case only just opens the leaf gold, will cause it to strike the sides for a long time together; and the electricity, which was not before communicated, now passes into the electrometer, causing the leaf gold to repel after it is carried away. Even sealing wax will thus communicate its electricity at the distance of 12 inches at least, which it would scarcely otherwise do by rubbing upon the cap. A cloud of chalk or wheat flower may be made in one room, and the electrometer with its candle be afterwards leisurely brought from another room, and the

the cloud will electrify it before it comes very near. The air of a room adjoining to that wherein the electrical machine was used, was very sensibly electrified, which was perceived by carrying the instrument through it with its candle.

(607.) In very clear weather, when no clouds were visible, this electrometer has been often applied to the insulated string of kites without metal, and their positive electricity caused the leaf gold to strike the sides; but when a kite was raised in cloudy weather with a wire in the string, and when it gave sparks about a quarter of an inch long, the electricity was sensible by the electrometer at ten yards or more from the string; but when placed at the distance of six feet, the leaf gold continued to strike the sides of the electrometer for more than an hour together, with a velocity increasing and decreasing with the density or distance of the unequal clouds which passed over. Sometimes the electricity of an approaching cloud has been sensible without a kite, though in a very unfavourable situation for it, being in a town surrounded with hills, and where buildings encompassed the wall on which the electrometer was placed. A thunder cloud passing over caused the leaf gold to strike the sides of the glass very quick at each flash of lightning.

(608.) No sensible electricity is produced by blowing pure air, projecting water, by smoke, flame, or explosions of gun powder. A book was placed upon the cap, and struck with silk, linen, woollen, cotton, parchment, and paper, all which produced negative repulsion; but when the other side of the book was struck with silk, it became positive; this side, struck at right angles with the former, was again negative; and by continuing the strokes which produced positive, it changed to negative for a little while; and, by stopping again, became positive. No other book would do the same, though the sides were scraped unchained, upon a supposition that altering the surface would produce it. At last, one side of a book was moistened, which changed it; whence it was concluded, that one edge of the book had lain in a damp place; which conjecture was farther confirmed by all the books becoming positive in damp weather, and one of them being dried at the fire again became negative. When the cap is approached with excited sealing wax, the leaf gold may be made to strike the sides of the glass above 12 times; and as the sealing wax recedes, it strikes nearly as often; but if it approaches much quicker than it recedes, the second number will sometimes be greater. The quantity of electricity necessary to cause a repulsion of the leaf gold is so small, that the sharpest point or edges do not draw it off without touching; hence it is unnecessary to avoid points or edges in the construction of this instrument.

(609.) On blowing powders from a pair of bellows at about the distance of 3 inches, upon a plate which is moistened or oiled, its electricity is contrary to that produced by blowing upon a dry plate. This shows that the electricity of the streams of powder issuing out of the bellows is only contrary to the more expanded part, because it is within the influence of its atmosphere; for when this is destroyed by the adhesion of the pow-

der to the moistened plate, it is negative when the bellows are positive, as it was before positive when the more expanded cloud was negative. The experiments on evaporation of water may be tried with more ease and certainty of success by heating the small end of a tobacco pipe, and pouring water into the head; which running down to the heated part, is suddenly expanded, and will show its electricity when projected upon the cap of the electrometer more sensibly than any other way that has been tried. If the pipe be fixed in a cloven stick, and placed in the cap of one electrometer while the steam is projected upon another, it produces both electricities at once. Spirit of wine and ether are electrified like water. Oil and vitriolic acid produced smoke without any change of electricity. In these experiments a long pipe is better than a short one.

(610.) Mr CAVALLO invented an electrometer which answers for observing the electricity of the atmosphere extremely well, though not with such nice accuracy as Mr Bennet's. He gives the following account of it. *Fig. 1. Plate CXXXIII.* represents a very simple instrument for making experiments on the electricity of the atmosphere and which, on several accounts, seems to be the most proper for that purpose. A B is a covered jointed fishing rod, without the last or smallest joint. From the extremity of this rod proceeds a slender glass tube C, covered with sealing wax and having a cork D at its end, from which a pith ball electrometer E is suspended. H G I is a piece of twine fastened to the other extremity of the rod, and supported at G by a small string F. At the end, I, of the twine, a pin is fastened which when pushed into the cork D, renders the electrometer E uninsulated. When I would observe the electricity of the atmosphere with this instrument, I thrust the pin, I, into the cork D and holding the rod by its lower end A, project it out from a window in the upper part of the house, into the air, raising the end of the rod with the electrometer, so as to make an angle of about 50° or 60° with the horizon. In this situation keep the instrument for a few seconds; and then pulling the twine at H, the pin is disengaged from the cork D; which operation causes the string to drop in the dotted situation K L, and leaves the electrometer insulated, and electrified with an electricity contrary to that of the atmosphere. Then done, I draw the electrometer into the room; and examine the quality of the electricity without construction either from wind or dew. With this instrument I have made observations on the electricity of the atmosphere several times in a day for several months."

(611.) Mr CAVALLO'S ELECTROMETER FOR RAIN is represented in *fig. 2. Plate CXXXIII.* Of this he gives the following description: "In principle it is nothing more than an insulated instrument to catch the rain, and by a pith ball electrometer, to show the quantity and quality of its electricity.—A B C I is a strong glass tube about 2½ feet long, having a tin funnel D E cemented to its extremity, which funnel defends part of the tube from the rain. The outside surface of the tube from A to B is covered with sealing wax; and also is the part of it which is covered by the funnel.



Fig. 2.



Fig. 3.



Fig. 4.

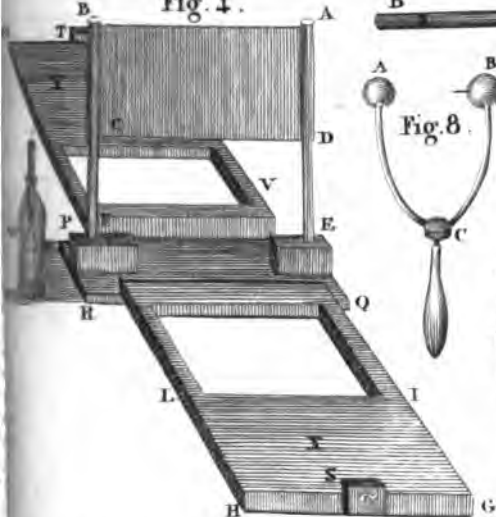


Fig. 5.

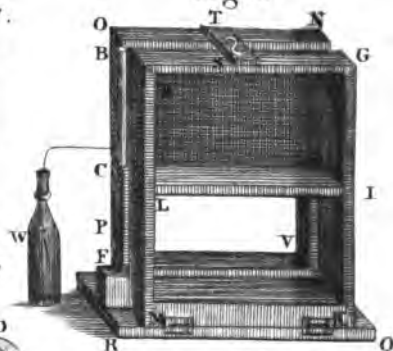


Fig. 7.

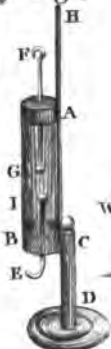


Fig. 8.



Fig. 10.



Fig. 14.

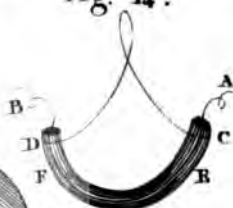


Fig. 9.



Fig. 12.



Fig. 11.

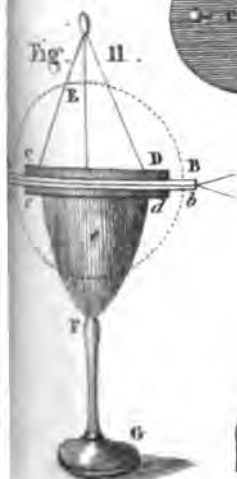


Fig. 6.
Bennet's Doubler
of Electricity.

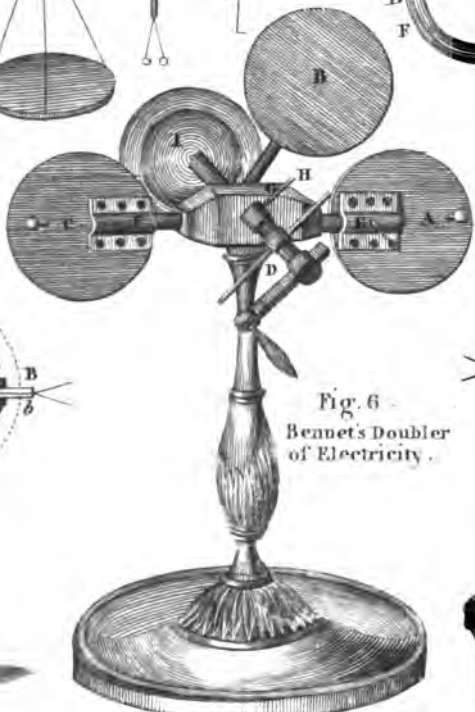


Fig. 13.

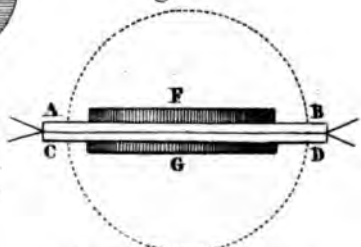


Fig. 15. Insulating Stool.



nel. FD is a piece of cane, round which brass wires are twisted in different directions, so as to catch the rain easily, and at the same time to make to resistance to the wind. This piece of cane is fixed into the tube; and a slender wire proceeding from it goes through the bore of the tube, and communicates with the strong wire AG, which is thrust into a piece of cork fastened to the end, A, of the tube. The end, G, of the wire AG, is formed in a ring, from which I suspend a more or less sensible pith ball electrometer as occasion requires. This instrument is fastened to the side of the window frame, where it is supported by strong brass hooks at CB; which part of the tube is covered with a silk lace, in order to adapt it better to the hooks. The part FC is out of the window, with the end F elevated a little above the horizon. The remaining part of the instrument comes through a hole in one of the lights of the sash within the room, and no more of it touches the side of the window than the part CB. When it rains, especially in passing showers, this instrument, standing in the situation above described, is frequently electrified; and, by the diverging of the electrometer, the quantity and quality of the electricity of the rain may be observed without any danger of mistake. With this instrument I have observed, that the rain is generally, though not always, electrified negatively; and sometimes so strongly, that I have been able to charge a small coated phial at the wire AG. This instrument should be fixed in such a manner that it may be easily taken off from the window and replaced again as occasion requires; for it will be necessary to clean it very often, particularly when a shower of rain is approaching."

SECT. XIII. *Of the CONDENSER, the DOUBLER, and the COLLECTOR of ELECTRICITY; the ELECTRICAL AIR THERMOMETER, &c.*

(612.) Although most of the electrometers described in last section are extremely accurate, yet there are many degrees of electricity too small to be observed by any of them. To be able to collect them, it is necessary to have an instrument capable of retaining the electricity it receives for a considerable time, and of allowing it to accumulate till it becomes capable of being measured by some of the common methods. To attain these objects, two instruments have been invented, upon which Mr Cavallo has the following observations.

(613.) "Besides the way of ascertaining small quantities of electricity by means of very delicate electrometers, two methods have been communicated to the philosophical world, by which such quantities of electricity may be rendered manifest as could not be perceived by other means. The first of those methods is an invention of M. VOLTA, the apparatus for it being called the CONDENSER of ELECTRICITY, and is described in the Philosophical Transactions, Vol. LXXII. The second is a contrivance of the rev. Mr A. BENNET, who calls the apparatus THE DOUBLER of ELECTRICITY. A description of it is inserted in the Philosophical Transactions, Vol. LXXXVII.

(614.) "M. VOLTA's condenser consists of a flat and smooth metal plate, furnished with an insulating handle, and a semiconducting, or imper-

fectly insulating, plane. When one wishes to examine a weak electricity with this apparatus, as that of the air in calm and hot weather, which is not generally sensible to an electrometer, he must place the above-mentioned plate upon the semi-conducting plane, and a wire, or some other conducting substance, must be connected with the metal plate, and must be extended in the open air, so as to absorb its electricity; then, after a certain time, the metal plate must be separated from the semi-conducting plane; and being presented to an electrometer, will electrify it much more than if it had not been placed upon the above mentioned plane.

(615.) "The principle upon which the action of this apparatus depends is, that the metal plate, whilst standing contiguous to the semi-conducting plane, will both absorb and retain a much greater quantity of electricity than it can either absorb or retain when separate, its capacity being increased in the former and diminished in the latter case.

(616.) "Whoever considers this apparatus, will easily find, that its office is not to manifest a small quantity of electricity, but to condense an expanded quantity of electricity into a small space: hence, it by means of this apparatus one expected to render more manifest than it generally is, when communicated immediately to an electrometer, the electricity of a small tourmalin, or of a hair when rubbed, he would find himself mistaken.

(617.) "It is Mr BENNET's doubler that was intended to answer that end; viz. to multiply, by repeated doubling, a small, and otherwise unperceivable, quantity of electricity, till it became sufficient to affect an electrometer, to give sparks, &c. The merit of this invention is certainly considerable; but the use of it is far from precise and certain. This apparatus consists of 3 brass plates, which we shall call A, B, and C; each of which is about 3 or 4 inches in diameter. The first plate A is placed upon the gold leaf electrometer, or it may be supported horizontally by any other insulating stand, and its upper part only is thinly varnished. The 2d plate B is varnished on both sides, and is furnished with an insulating handle, which is fastened laterally to the edge of it. The 3d plate C is varnished on the under side only, and is furnished with an insulating handle, which is perpendicular to its upper surface.

(618.) "This apparatus is used in the following manner. The plate B being laid upon the plate A, the small quantity of electricity, which is required to be multiplied, is communicated to the under part of the plate A, and at the same time the upper part of B is touched with a finger; then the finger is first removed; the plate B is afterwards removed from over the plate A. The plate C is now laid upon B, and its upper surface is touched, for a short time, with a finger. By this operation it is clear, that if the electricity communicated to the plate A is positive, the plate B must have acquired a negative electricity, and the plate C must have acquired the positive, viz. the same of the plate A. Now the plate B, being separated from C, is laid as before upon A; the edge of C is brought into contact with the

under part of the plate A, and at the same time the upper part of B is touched with a finger; by which means the plate B, being acted upon by the atmospheres of both the plates A and C, will acquire nearly twice as much electricity as it did the first time, and of course will render the plate C, when that is laid upon it, proportionably more electrified than before: thus, by repeating this operation, the electricity may be increased to any required degree.

(619.) "The varnish on those surfaces of the plates which are to lie contiguous to each other, serves to prevent the metal of one touching the metal of the other; for in that case, instead of one plate causing a contrary electricity in the other, the electricity of the first would be gradually communicated to the others, and would be dissipated.

(620.) "As soon as I understood the principle of this contrivance, I hastened to construct such an apparatus, in order to try several experiments of a very delicate nature, especially on animal bodies and vegetables, which could not have been attempted before, for want of a method of ascertaining exceedingly small quantities of electricity; but after a great deal of trouble, and many experiments, I was at last forced to conclude, that the doubler of electricity is not an instrument to be depended upon, for this principal reason, viz. because it multiplies not only the electricity which is willingly communicated to it from the substance in question; but it multiplies also that electricity which in the course of the operation is almost unavoidably produced by accidental friction; or that quantity of electricity, however small it may be, which adheres to the plates in spite of every care and precaution.

(621.) "Having found, that with a doubler constructed in the above described manner, after doubling or multiplying 20 or 30 times, it always became strongly electrified, though no electricity had been communicated to it before the operation, and though every endeavour of depriving it of any adhering electricity had been practised; I naturally attributed that electricity which appeared after repeatedly doubling, to some friction given to the varnish of the plates in the course of the operation. In order to avoid entirely this source of mistake, or at least of suspicion, I constructed 3 plates without the least varnish, and which, of course, could not touch each other, but were to stand only within about one 8th of an inch of each other. To effect this, each plate stood vertical, and was supported by two glass sticks, which were covered with sealing wax. These were inserted into a wooden pedestal $7\frac{1}{2}$ inches long, $2\frac{1}{2}$ broad, and $1\frac{1}{4}$ inch thick, being kept fast by cement both to the pedestal and likewise to another piece of wood fastened to the back of the plate. The plate itself is of strong tin, and measures about 8 inches in diameter. The stand projects very little before the plate; by which means, when two of those plates are placed upon a table facing each other, the wooden stands will prevent their coming into actual contact.

(622.) "I need not describe the manner of doubling or of multiplying with those plates; the operation being essentially the same as when the

plates are constructed according to Mr Bennet's original plan, excepting that, instead of placing them one upon the other, mine are placed facing each other; and in performing the operation they are laid hold of by the wooden stand A B; so that no friction can take place either upon the glass legs or upon any varnish; for these plates have no need of being varnished. Sometimes, instead of touching the plates themselves with the finger I have fixed a piece of thin wire to the back of the plate, and have then applied the finger to the extremity of the wire, suspecting that some friction and some electricity might possibly be produced, when the finger was applied in full contact with the plate itself.

(623.) "It is evident, that as the plates do not come so near to each other in this as they do in the other construction, the electricity of one of them cannot produce so great a quantity of the contrary electricity in the opposite plate: hence in this construction, it will be necessary to continue the operation of doubling somewhat longer; but this disadvantage is more than repaid by the certainty of avoiding any friction.

(624.) "Having constructed those plates, I thought that I might proceed to perform the intended experiments without any further objection: but in this I found myself quite mistaken; for on trying to multiply with those new plates, and when no electricity had previously been communicated to any of them, I found, that after doubling 10, 15, or at most 20 times, they came so full of electricity as to afford even sparks. All my endeavours to deprive them of electricity proved ineffectual. Neither exposing them, especially the glass sticks, to the flame of burning paper, nor breathing upon them repeatedly, or leaving them untouched for several days, and even for a whole month, during which time the plates remained connected with the ground by means of good conductors, nor any other precaution I could think of, was found capable of depriving them of every vestige of electricity; so that they might show none after doubling 10, 15, or at most 20 times.

(625.) "The electricity produced by them was not always of the same sort; for sometimes it was negative for 2 or 3 days together; at other times it was positive for 2 or 3 days more; and often changed in every operation. This made me suspect, that possibly the beginning of that electricity was derived from my body, and being communicated by the finger to the plate that was first touched, was afterwards multiplied. In order to clear this suspicion, I actually tried those plates at different times, viz. before and after having walked a great deal, before and after dinner, and noting very accurately the quality of the electricity produced each time; but the effects seemed to be quite unconnected with the above mentioned concomitant circumstances; which independence was further confirmed by observing that the electricity produced by the plates was of a fluctuating nature, even when, instead of even touching the plate with the finger, they had been touched with a wire, which was connected with the ground, and which I managed by means of an insulating handle.

(625.) "At last, after a great variety of experiments, which it is unnecessary to describe; I became fully convinced, that those plates did always retain a small quantity of electricity, perhaps of that sort with which they had been last electrified, and of which it was almost impossible to deprive them. The various quality of the electricity produced owing to this, viz. that as one of those plates was possessed of a small quantity of positive electricity, and another was possessed of the negative electricity, that plate which happened to be the most powerful, occasioned a contrary electricity in the other plate, and finally produced an accumulation of that particular sort of electricity.

(627.) "These observations evidently show, that no precise result can be obtained from the use of these plates; and of course, that when conducted according to the original plan, they are more equivocal, because they admit of more chances of mistake. As those plates, after doubling or multiplying only 4 or 5 times, show no quantity of electricity, none having been communicated to them before, I imagined that they might be useful so far only, viz. that when a small quantity of electricity is communicated to any of them in the course of some experiment, one might multiply it with safety 4 or 5 times, which would be of advantage in various cases; but in this my expectations were disappointed.

(628.) "Having observed, after many experiments, that *ceteris paribus*, when I began to multiply from a certain plate, which we shall call A, the electricity which resulted was generally positive; and when I began with another plate B, viz. considering this plate B as the first plate, the resulting electricity was generally negative; I communicated some negative electricity to the plate with a view of destroying its inherent positive electricity. This plate A being now electrified negatively, but so weakly as just to affect an electrometer, I began doubling; but after having doubled 3 or 4 times, I found, by the help of an electrometer, that the communicated negative electricity in the plate was diminished instead of increased; so that sometimes it vanished entirely, though by continuing the operation it began to increase again, after a certain period. This shows, that the quantity of electricity, which however small it may be, remains in a plate fastened to the plates, will help either to increase or to diminish the accumulation or multiplication of the communicated electricity, according as it happens to be of the same or of a contrary nature.

(629.) "After all the above mentioned experiments made with those doubling or multiplying plates, we may come to the following conclusion, that the invention is very ingenious, but their use is by no means to be depended upon. It is to be wished that they may be improved so as to evade the weighty objections that have been mentioned: the first desideratum being to construct a set of such plates as, when no electricity is communicated, will produce none after having performed the operation of doubling for a certain number of times.

(630.) "Upon the whole, the methods by which small quantities of electricity may be ascer-

tained with precision are, as far as I know, only three. If the absolute quantity of electricity be small and pretty well condensed, as that produced by a small tourmalin when heated, or by a hair when rubbed, the only effectual method of manifesting its presence, and ascertaining its quality, is to communicate it immediately to a very delicate electrometer, viz. a very light one, that has no great extent of metallic or of other conducting substance; because if the small quantity of electricity that is communicated to it be expanded throughout a proportionably great surface, its elasticity, and of course its power of separating the corks of an electrometer, will be diminished in the same proportion.

(631.) "The other case is, when one wants to ascertain the presence of a considerable quantity of electricity, which is dispersed or expanded into a great space, and is little condensed, like the constant electricity of the atmosphere in clear weather, or like the electricity which remains in a large Leyden phial after the first or second discharge.

(632.) "To effect this, I use an apparatus, which in principle is nothing more than M. VOLTA's condenser; but with certain alterations, which render it less efficacious than in the original plan, but at the same time render it much less subject to equivocal results. I place two of the above described tin plates upon a table, facing each other, and about one 8th of an inch asunder. One of those plates, for instance A, is connected with the floor by means of a wire, and the other plate B is made to communicate, by any convenient means, with the electricity that is required to be collected. In this disposition the plate B, on account of the proximity of the other plate, will imbibe more electricity than if it stood far from it, the plate A in this case acting like the semi-conducting plane of M. Volta's condenser, though not with quite an equal effect, because the other plate B does not touch it; but yet, for the very same reason, this method is incomparably less subject to any equivocal result. When the plates have remained in the said situation for the time that may be judged necessary, the communication between the plate B and the conducting substance which conveyed the electricity, must be discontinued by means of a glass stick, or other insulating body; then the plate A is removed, and the plate B is presented to an electrometer, in order to ascertain the quality of the electricity; but if the electrometer be not affected by it, then the plate B is brought with its edge into contact with another very small plate, (about the size of a shilling,) which stands upon a semiconducting plane, (of wood covered with copal varnish,) after the manner of M. Volta's condenser; which done, the small plate, being held by its insulating handle, is removed from the inferior plane, and presented to the electrometer: and it frequently happens, that the small plate will affect the electrometer very sensibly, and quite sufficient for the purpose; whereas the large plate itself showed no clear signs of electricity.

(633.) "If it be asked, why I use the semiconducting plane for this small plate, and not for the large one? the answer is, first, because the large

semiconducting plane is incomparably more difficult to be procured than the small one; and adly, because the small plane may be easily deprived of any accidental electricity which may adhere to it; but the large one is more difficultly rendered fit for the purpose, especially as the large plate ought in general to remain upon it a much longer time than the small plate is to remain upon its semiconducting plane.

(634.) "The 3d and last case is, when the electricity to be ascertained is neither very considerable in quantity nor much condensed; such is the electricity of the hair of certain animals, of the surface of chocolate when cooling, &c. In this case the best method is to apply a metal plate, furnished with an insulating handle, like an electrophorus plate, to the electrified body, and to touch this plate with a finger for a short time whilst standing in that situation; which done, the plate is removed, and is brought near an electrometer; or its electricity may be communicated to the plate of a small condenser, as directed in the preceding case, which will render the electricity more conspicuous. It is evident, that in this case the metal plate will acquire the electricity contrary to that of the substance in question: but this answers the same purpose; for if the electricity of the plate be found to be positive, one must conclude, that the electricity of the body in question is negative, and contrariwise. In this operation, care must be had not to put the metal plate too near, or in full contact with the substance to be examined, lest the friction, likely to happen between the plate and the body, should produce some electricity, the origin of which might be attributed to other causes.

(635.) "Having thus far described the surest methods of ascertaining the presence and quality of electricity, when its quantity or degree of condensation is small, I shall now beg leave to add some farther remarks on the subject of electricity in general, and which have been principally suggested by what has been mentioned.

(636.) "On the hypothesis of a single electric fluid, it is said, that every substance in nature, when not electrified, contains its proper share of electric fluid, which is proportionate to its bulk, or to some other of its properties; and it is generally believed, that this equal or proportionate distribution of electric fluid takes place with the greatest part of natural bodies. However, the fact is far from being so; and I may venture to assert, that, strictly speaking, every substance is always electrified, viz. that every substance, and even the various parts of the same body, contain at all times more or less electric fluid than that quantity of it which it ought to contain, in order to be in an electrical equilibrium with the bodies that surround it.

(637.) "At first sight it may be thought quite immaterial to know, whether the electric fluid is dispersed in the just proportion among the various substances which are not looked upon as electrified, or whether it deviates in a small degree from that proportionate distribution; but it will hereafter appear, that one of those assertions will lead us to the explanation of an interesting phenomenon in electricity, whereas the other does not

admit of it; besides, what is called a small difference of the proportionate distribution, inasmuch as it does not affect our instruments, may be sufficient for several operations of nature, which it is our interest to investigate.

(638.) "If we enquire what phenomena evince this altered distribution, or the actually electrified state of all bodies, the preceding observations will furnish some very unequivocal ones; especially that of the doubling plates made after my plan which showed to be electrified even after having remained untouched for a whole month, during which time they had been in communication with the ground; for if each of them had contained an equal share of electric fluid, the electric atmosphere of one of them could not possibly occasion a contrary electricity in the other, and consequently no accumulation of that power could have happened.

(639.) "A great number of instances are related in books on the subject of electricity, and in the *Phil. Trans.* of pieces of glass, of sulphur, of sealing wax, &c. having remained electrified so far as to affect an electrometer for months after they had been excited, or even touched; but the following experiment will show, in a clearer manner, a great length of time that a quantity of electricity will remain upon a body.

(640.) "Having constructed a gold leaf electrometer in the nicest manner I could, and which on account of the non-conducting nature and construction of its upper part, could remain sensibly electrified for several hours together, I communicated some electricity to it, which caused the leaf of gold leaf to diverge with a certain angle; as the electricity was gradually dissipated, the divergency diminished in the same proportion. Now whilst this diminution of divergency was going on, I looked through a small telescope, and, by means of a micrometer, measured the chords of the angles of divergency, setting down the time elapsed between each pair of contiguous observations; and as the chord of the angle of divarication is the direct simple proportion of the density of electric fluid, I could by this means know how much electric fluid was lost by the electrometer at a certain time, and of course what portion of electricity first communicated to the electrometer still remained in it. Let us make the chord of the angle of divarication on first electrifying the electrometer, or rather when first observed, equal to 16; or let us conceive that quantity of electricity to be divisible into 16 equal parts.

(641.) "I observed, that, when the chord of the angle became equal to eight, the time elapsed between this and the first observation was one minute; when the chord became equal to four, the time elapsed between this point and the preceding observation was 3' 30"; when the chord became equal to two, the time elapsed since the preceding observation was 17'; and when the chord became equal to one, the time elapsed since the preceding observation was one hour and a quarter; after which the electrometer remained sensibly electrified for a long time.

(642.) "In repeating this experiment, the time elapsed between the corresponding observations did not follow strictly the same proportion of increase

crease; nor did they increase regularly in the same experiments, which may be attributed in great measure to the inaccuracy in observing, and to the fluctuating state of the air; but it could be safely inferred from all the experiments, that the times required for the dispersion of the electricity were at least greater than the inverse duplicate proportion of the densities of the electricity remaining in the electrometer. And if we imagine, that they continue to diminish in the same proportion of increasing time, which is far from being an extravagant supposition, we shall find, by a very easy calculation, that about two years after the electrometer would still retain the one thousandth part of the electricity communicated to it in the beginning of the experiment; and as we do not know how far a quantity of electricity is divisible, or to what extent it may be expanded, we may conclude with saying, that strictly speaking the electrometer would remain electrified for many years.

(643.) "It may be inferred from this, as well as from many other experiments, that the air, or in general any substance, is a more or less perfect conductor of electricity, according as the electricity which is to pass through it is more or less condensed; so that if a given quantity of electric fluid be communicated to a small brass ball, one may take it away by simply touching the ball with a finger; but if the same quantity of electric fluid be communicated to a surface of about 100 or 200 square feet, the touching with the finger will only take away any part of it.

(644.) "If it be asked, what power communicates the electricity, or originally disturbs the equilibrium of the natural quantity of electric fluid in the various bodies of the universe? we may answer, that the fluctuating electric state of the air, the passage of electrified clouds, the evaporation and condensation of fluids, and the friction arising from divers causes, are perpetually acting upon the electric fluid of all bodies, so as either to increase or diminish it, and that to a more considerable degree than is generally imagined.

(645.) "I shall conclude, with briefly proposing an explanation of the production of electricity by friction, which is dependent upon the above stated supposition, viz. that bodies are always electrified in some degree; and like wise upon the well known principle of the capacity of bodies for holding electric fluid being increased by the proximity of other bodies in certain circumstances.

(646.) "It seems to me, that the cylinder of an electrical machine must always retain some electricity of the positive kind, though not equally dense in every part of its surface; therefore, when one part of it is set contiguous to the rubber, it must induce a negative electricity in the rubber. Now, when, by turning the cylinder, another part of it (which suppose to have a less quantity of positive electricity than the preceding) comes quickly against the rubber; the rubber being already negative, and not being capable of losing that electricity very quickly, must induce a stronger positive electricity in the former part which is now opposite to it: but this part cannot become more positively electrified, unless it receives the electric fluid from some other body, and therefore some quantity of electric fluid passes from the lowest part of

the rubber to this part of the glass; which additional quantity of electric fluid is retained by it alone only whilst it remains in contact with the rubber; for after that, its capacity being diminished, the electric fluid endeavours to escape from it. Thus we may conceive how every other part of the glass acquires the electric fluid, &c. and what is said of the cylinder of an electrical machine may, with proper changes, be applied to any other electric and its rubber."

(647.) Mr CAVALLO has also invented an instrument for observing very small quantities of electricity, which, from its office, may be called a COLLECTOR OF ELECTRICITY. Its properties are, *first*, that, when connected with the atmosphere, the rain, or in short with any body which produces electricity slowly, or which contains that power in a very rarefied manner, it collects the electricity, and afterwards renders both the presence and quality of it manifest, by communicating it to an electrometer. *2dly*, This collecting power, by increasing the size of the instrument, and especially by using a second or smaller instrument of the like sort to collect the electricity from the former, may be augmented to any degree. *3dly*, It is constructed, managed, and preserved with ease and certainty; and it never gives, nor can it give, an equivocal result, as he has proved experimentally, and as will appear by considering its construction.

(648.) Plate CXXXIII. exhibits two perspective views of this collector. *Fig. 4.* shows the instrument in the state of collecting the electricity; and *fig. 5.* shows it in the state in which the collected electricity is to be rendered manifest. An electrometer is annexed to each. The letters of reference indicate the same parts in both figures. ABCD is a flat tin plate, 13 inches long and 8 inches broad; to the two shorter sides of which are soldered two tin tubes, AD and BC, which are open at both ends. DE and CF are two glass sticks covered with sealing wax by means of heat, and not by dissolving the sealing wax in spirits. They are cemented into the lower apertures of the tin tubes, and also in the wooden bottom of the frame or machine at E and F; so that the tin plate ABCD is supported by those glass sticks in a vertical position, and is exceedingly well insulated. GHILKM and NOPV are two frames of wood, which being fastened to the bottom boards by means of brass hinges, may be placed so as to stand in an upright position and parallel to the tin plate, as shown in *fig. 5.* or they may be opened, and laid upon the table which supports the instrument, as shown in *fig. 4.* The inward surfaces of those frames from their middle upwards are covered with gilt paper XY; but it would be better to cover them with tin plates hammered very flat. When the lateral frames stand straight up, they do not touch the tin plate; but they stand at about one fifth part of an inch asunder. They are also a little shorter than the tin plate, in order that they might not touch the tin tubes AD, BC. In the middle of the upper part of each lateral frame is a small flat piece of wood S and T, with a brass hook; the use of which is to hold up the frames without the danger of their falling down when not required, and at the same time it prevents their coming nearer

nearer to the tin plate than the proper limit. It is evident, that, when the instrument stands as shown in *fig. 5*, the gilt surface of the paper XY, which covers the inside of the lateral frames, stands contiguous and parallel to the tin plate.

(649.) This instrument, when used, must be placed upon a table, a window, or other convenient support; a bottle electrometer is placed near it, and is connected, by means of a wire, with one of the tin tubes AB, BC; and by another conducting communication the tin plate must be connected with the electrified substance, the electricity of which is required to be collected on the plate ABCD: thus, for instance, if it be required to collect the electricity of the rain or of the air, the instrument being placed near a window, a long wire must be put with one extremity into the aperture A or B of one of the tin tubes, and with the other extremity projecting out of the window. If it be required to collect the electricity produced by evaporation, a small tin pan, having a wire or foot of about six inches in length, must be put upon one of the tin tubes, so that, the wire going into the tube, the pan may stand about two or three inches above the instrument. A lighted coal is then put into the pan, and a few drops of water poured upon it will produce the desired effect. Thus far may suffice with respect to the mechanical description of the instrument: the power and use of it will be made apparent by the following experiments.

(650.) I. Communicate to the tin plate ABCD, as much electricity as would very sensibly affect a common cork ball electrometer; then, if the lateral frames GHM, NOP, stand upright, as in *fig. 5*, the electrometer W will show no divergency; but if the frames are opened and let down, as in *fig. 4*, the balls of the electrometer W will immediately repel each other, and by the approach of an excited piece of sealing wax, the quality of the electricity may be easily ascertained after the usual manner. Put up the lateral frames again, and the electricity will apparently vanish; let them down, and the electricity will re-appear, and so on. If you touch any part of the tin plate or tin tubes with your finger, the electricity is thereby entirely removed, and that will be the case whether the lateral frames are up or down.

(651.) II. Take an extended piece of tin foil, about 4 yards square, and, holding it by a silk thread, electrify it so weakly as not to be capable of affecting an electrometer; then bring it in contact with the tin plate of the collector, whilst the lateral frames are up. This done, remove the tin foil, let down the lateral frames one after the other; and on doing this the electrometer W will immediately manifest a considerable degree of electricity. But if the electrometer were to show no sensible degree of electricity, a smaller collector, *viz.* one having a tin plate of about four square inches, must be brought into contact with the tin plate of the large collector, whilst the lateral frames of the latter only are down; and then the small collector being removed from the large one, its lateral frames are opened, and its tin plate is presented to an electrometer, which will thereby be electrified to a much greater degree than the electrometer W was by the large collector.

(652.) III. Let a common cork ball electrometer be fastened to an insulated conductor, having about 2 or 3 square feet of surface, and communicate to it such a quantity of electricity as may be sufficient to let the balls of the electrometer stand at about one inch asunder. In this state bring the conductor in contact with the tin plate of the collector for a very short time, and it will be found that the balls of its electrometer will immediately approach and touch each other, showing that the electricity of the conductor is gone to the plate of the collector; and, in fact, if you let down the lateral frames, the balls of the electrometer W will immediately repel each other to a very great degree.

(653.) From these experiments, therefore, it appears plain, that the tin plate of this instrument can collect and retain a vast quantity of electricity when the conducting surfaces of the lateral frames are contiguous to it, in comparison to that quantity which it can either collect or retain when those surfaces are removed from its vicinity. The quantity of electricity, which the tin plate ABCD is capable of collecting, principally depends on circumstances, *viz.* 1st, on the distance between the tin plate and the conducting lateral surfaces: the smaller that distance is, the greater being the collecting power: 2dly, on the size of the instrument: and, 3dly, on the quantity of electricity possessed by the body from which it must be collected or taken away.

(654.) The principle upon which the action of this instrument depends, is the same as that of the electrophorus of M. Volta's condenser, and of many other electrical experiments; namely, that a body has a much greater capacity for holding electricity when its surface is contiguous to a conductor which can easily acquire the contrary electricity, than when it stands not in that situation.

(655.) The rev. Mr Abraham Bennet, in a Treatise published lately, gives an account of his DOUBLER OF ELECTRICITY, with some improvements made upon it by Mr Nicholson; which tend to remove the objections of Mr Cavallo. In its improved state, it consists of two insulated and immovable plates about two inches in diameter, and a moveable plate also insulated, which revolves in a vertical plane parallel to the two immovable plates, passing them alternately. See *Pl. CXXXIII. fig. 6.*

(656.) "The plate A is constantly insulated, and receives the communicated electricity. The plate B revolves; and when it is opposite the plate A, the connecting wires at the end of the cross piece D must touch the pins of A and C at EF, and a wire proceeding from the plate B must touch the middle piece G, which is supported by a brass, wooden, or other conducting pillar in connection with the earth. In this position, if electricity be communicated to the plate A, the plate B will acquire a contrary state; and passing forwards, the wires also moving with it by means of the same insulating axis, the plates are again insulated till the plate B is opposite to C, and then the wire at H touches the pin in C, connecting it with the earth, and communicating the contrary state of electricity to that of B, but of the same kind with that of A. By moving the handle still further, B

is again brought opposite to A; and the connecting wires joining A and C, they both act upon B, which is connected with the earth as before, and nearly double its intensity, whilst the electricity of B is absorbed into A; because of the increased capacity of A, whilst opposed to B, capable by its connection with the earth of acquiring a contrary charge sufficient to balance the influential atmospheres of both plates.

(657.) "Thus by continuing to revolve the plate the process is performed in a very expeditious and accurate manner. The ball, I, is made heavier on one side than the other, and screwed upon the handle opposite to the handle, to counterbalance the plate B, which may therefore be stopped in any part of its revolution.

(658.) "Yet notwithstanding the convenience and accuracy of this doubler, it always produced spontaneous electricity, even after all the refinements used in its construction had been melted over a candle, and after standing a long time with its plates in connection with the earth. I before conjectured that this spontaneous electricity was not owing to accidental friction, but to the increased capacity of approximating parallel plates which might attract and retain their charge though neither of them were insulated. To prove this hypothesis, I first endeavoured more effectually to deprive the instrument of the electricity left communicated, and that I might know whether this spontaneous charge, supposed to arise from the increased capacity of the parallel plates, would be always of the same kind.

(659.) "To effect this deprivation, I connected plates A and C together by a wire hooked at each end upon two small knobs on the backs of the plates, the middle of the same wire touching the pillar which supports the doubler. Another wire was hooked at one end upon the back of the plate B, and at the other end to the brass ball which counterbalances this plate. Thus all the plates were connected with the earth; and by turning the handle of the doubler, it might be charged of electricity in every part of its revolution.

(660.) "After often trying this method of depriving the doubler, I observed that its spontaneous charge was almost always negative. I then connected A and C with a positively charged bottle, and turned the doubler till it produced sparks a long time together; and after this strong positive charge, I hooked on the wires as above, and turned the plate B about 100 times, which so deprived the doubler of its positive electricity, that when the wires were taken off, it produced a negative charge at about the same number of revolutions which it required before. The positively charged bottle was again applied; and the wires hooked upon the plates as before, B was revolved only 50 times; yet this was found sufficient to deprive it of its positive charge, and in many experiments 5 or 6 revolutions were sufficient: but I never thought it safe to stop at so few, and have therefore generally turned the handle 40 or 50 times between every experiment.

(661.) "Left electricity adhering to the doubler should obstruct the above experiments, I

did not let it stand in contact with the doubler during its revolutions, but touched the plate A with the cap of the electrometer, after I supposed its electricity was become sufficiently sensible: but lest even this contact should communicate any electricity, I made a cap for my electrometer of shell-lac, having a small tin tube in the centre, to which the gold leaf was suspended within the glass, and a bent wire was fixed to the top, which might easily be joined to the plate A of the doubler; and thus the gold leaf was more perfectly insulated, and the electricity could not be diffused over so large a surface. The glass which insulates the plates and cross piece of the doubler was also covered with shell-lac."

(662.) The ELECTRICAL AIR THERMOMETER, *fig. 7. Plate CXXXIII.* is an instrument designed to show the power of electricity by its rarefaction of the air through which the fluid passes. But though this instrument in theory might be supposed capable of manifesting the very least degrees of electricity, the rarefaction of the air by its means is so very small, that unless the power of electricity be very considerable, no expansion will be perceived. This instrument, however, certainly has its uses, and many curious experiments may be performed with it. A B represents a glass cylinder having a brass cap, with a wire and knob passing through it, and which is cemented on the open part of the glass. The under part is inverted into a small dish B C, containing quicksilver or some other liquid, which may arise in the small tube A H by an expansion of the air in the cylinder A B. C D is an insulating stand, which serves to sustain the whole; E is an hook by which a communication may be made to the ground; and F another for connecting the whole with the prime conductor of an electrical machine. The discharges of electricity made by the sparks between the knobs G and I expand the air, and force up the fluid into the small tube A H; and its rise there is marked upon a graduated scale. This instrument will likewise answer for showing the diminution or increase of any kind of air by the electric spark, as well as its sudden expansion by a spark or shock of a phial. Mr MORGAN has shown that the mercury in a common thermometer, if well made, may be raised by the electric blast.

(663.) An instrument invented by Mr NICHOLSON for distinguishing the two electricities from one another, is represented in *Plate CXXXIII, fig. 8.* A and B are two metallic balls placed at a greater or less distance from each other by means of the joint at C; the two branches C A being made of varnished glass. From one of the balls B proceeds a short point towards the other ball A. If the two be placed in the current of the electric matter, so that it may pass through the air from one to the other, its direction will be known. For if the electric matter pass from A to B, there will be a certain distance of the balls dependent on the strength of electricity, within which the dense sparks will pass from the point; but if its course be in the contrary direction, no spark will be seen, unless the balls be almost in contact with the point.

SECT. XIV. *Of the ELECTROPHORUS.*

(664.) The ELECTROPHORUS is an invention of an eminent Italian electrician, viz. professor VOLTA, of Como, in the Cisalpine Republic. It is a very useful tho' simple machine, consisting of two plates, A and B, usually of a circular form; see *Plate CXXX. fig. 24.* They may however be made square, or of the figure of a parallelogram, with equal advantage and more ease. At first the under plate was made of glass covered over with sealing wax; but there is little occasion for being particular either with regard to the substance of the lower plate, or the electric which is put upon it. A metallic plate, however, is perhaps preferable to a wooden one, though the latter will answer the purpose very well. This plate is to be covered with some electric substance. Pure sulphur answers nearly as well as the dearer electrics, sealing wax, gum-lac, &c.; but it has this bad quality, that, by rubbing it, some exceeding subtle steams are produced, which infect the person's clothes, and even his whole body, with a very disagreeable smell, and will change silver in his pocket to a blackish colour. The upper plate of the electrophorus is a brass plate, or a board or piece of pasteboard covered with tin foil or gilt paper, nearly to the same size with the electric plate, though it may be made somewhat larger. It is furnished with a glass handle, I, which ought to be screwed into the centre.

(665.) The manner of using this machine is as follows: First, the plate B is excited by rubbing its coated side with a piece of new white flannel, or a piece of hare's skin. A common hard shoe-brush, having the hair a little greased, will excite sulphur extremely well. When this plate is excited as much as possible, it is set upon the table with the electric side uppermost. 2dly, The metal plate is laid upon the excited electric, as represented in the figure. 3dly, The metal plate is touched with the finger or any other conductor, which, on touching the plate, receives a spark from it. Lastly, the metal plate A, being held by the extremity of its glass handle I, is separated from the electric plate; and, after it is elevated above that plate, it will be found strongly electrified with an electricity contrary to that of the electric plate, in which case, it will give a very strong spark to any conductor brought near it. By setting the metal upon the electric plate, touching it with the finger, and separating it successfully, a great number of sparks may be obtained apparently of the same strength, and that without exciting again the electric plate. If these sparks are repeatedly given to the knob of a coated pial, it will presently become charged.

(666.) "As to the continuance, says Mr CAVALLO, of this electric plate, when once excited without repeating the excitation, I think there is not the least foundation for believing it perpetual, as some gentlemen have supposed; it being nothing more than an excited electric, it must gradually lose its power, by imparting continually some of its electricity to the air, or other substances contiguous to it. Indeed its electricity, although it could never be proved to be perpetual by experi-

ments, lasts a very long time, it having been observed to be pretty strong several days, and even weeks, after excitation. The great duration of the electricity of this plate, I think, depends upon two causes: first, because it does not lose any electricity by the operation of putting the metal plate upon it, &c. and, secondly, because of its flat figure, which exposes it to a large quantity of air, in comparison with a stick of sealing wax, or the like, which, being cylindrical, exposes its surface to a greater quantity of air, which is continually robbing the excited electric of its virtue.

(667.) "The first experiment that I made, relative to this machine, were with a view to discover which substance would answer best for covering the glass plate, in order to produce the greatest effect. I tried several substances either fine or mixed; and at last I observed, that the strongest in power, as well as the easiest, I could construct, were those made with the second sort of sealing wax, spread upon a thick plate of glass. A plate that I made after this manner, and more than six inches in diameter, when once excited, could charge a coated pial several times successively, so strongly as to pierce a hole through a card with the discharge. Sometimes the metal plate, when separated from it, was so strongly electrified, that it darted strong flashes to the table upon which the electric plate was laid, and even to the air, besides causing the sensation of the conductor's web upon the face brought near it, like an electric strongly excited. The power of some of the plates is so strong, that sometimes the electric plate adheres to the metal when this is lifted up, nor do they separate even if the metal plate is touched by the finger or other conductor. It is remarkable that sometimes they will not act at first, but they may be rendered very good by scraping with the edge of a knife the shining or glossy surface of the wax. This seems analogous to the well known property of glass, which is, that new cylinders or globes, made for electrical purposes, are at first very bad electrics at first; but that they improve by being worked, i. e. by having their surface a little worn. Paper also has this property.

(668.) "If, after having excited the sealing wax, I lay the plate with the wax upon the table, and the glass uppermost, i. e. contrary to the common method; then, on making the usual experiment of putting the metal plate on it, and taking it off, &c. I observe it to be attended with the contrary electricity; that is, if I lay the metal plate upon the electric one, and, while in that situation touch it with an insulated body, that body acquires the positive electricity; and the metal removed from the electric plate, appears to be negative; whereas it would become positive, laid upon the excited wax. This experiment, I find, answers in the same manner if an electric plate is used which has the sealing wax coating on both sides, or one which has no glass plate.

(669.) "If the brass plate, after being separated from, be presented with the edge toward the wax, lightly touching it, and thus be drawn over its surface, I find that the electricity of the metal is absorbed by the sealing wax, and thus the elect-

tric plate loses part of its power; and if this operation is repeated five or six times, the electric plate loses its power entirely, so that a new excitation is necessary in order to revive it.

(670.) "If, instead of laying the electric plate upon the table, it is placed upon an electric stand, so as to be accurately insulated, then the metal plate set on it acquires so little electricity, that it can only be discovered with an electrometer; which shows, that the electricity of this plate will not be conspicuous on one side of it, if the opposite side is not at liberty either to part with or acquire more of the electric fluid. In consequence of this experiment, and in order to ascertain how the opposite sides of the electric plate would be affected in different circumstances, I made the following experiments:—

(671.) "Upon an electric stand E, (*Pl. CXXX.* 24.) I placed a circular tin plate, nearly 6 inches in diameter, which by a slender wire H communicated with an electrometer of pith balls G, which was also insulated upon the electric stand F. I then placed the excited electric plate D of 6 inches and a quarter in diameter, upon the tin plate, with the wax uppermost; and on removing my hand from it, the electrometer G, which communicated with the tin plate, *i. e.* with the under side of the electric plate, immediately opened with positive electricity. If, by touching the electrometer, I took that electricity off, the electrometer did not afterwards diverge. But if now, when the electrometer diverged, I presented my hand open, or any other uninsulated conductor, at the distance of about one or two inches, from the electric plate, without touching it, then the pith balls diverged; or, if they diverged before, came together, and immediately diverged again with positive electricity: I removed the hand, and the balls came together;—approached the hand, and they diverged: and so on.

(672.) "If, while the pith balls diverged with positive electricity, I laid the metal plate, holding it by the extremity K of its glass handle, upon the wax, the balls came, for a little time, towards each other, but soon opened again with the same, negative electricity.

(673.) "If, whilst the metallic rested upon the electric plate, I touched the former, the electrometer immediately diverged with positive electricity; which, if by touching the electrometer, I took off, the electrometer continued without divergence.—I touched the metal plate again, and the electrometer, opened again; and so on for a considerable number of times, until the metal plate had acquired its full charge. On taking now the metal plate up, the electrometer G instantly diverged with strong negative electricity.

(674.) "I repeated the above described experiments, with this only difference in the disposition of the apparatus, *i. e.* I laid the electric plate D with the excited sealing wax upon the circular tin plate, and the glass uppermost; and the difference in the result was, that where the electricity had been positive in the former disposition of the apparatus, it now became negative, and *vice versa*; except that, when I first laid the electric plate upon the tin, the electrometer G diverged with negative e-

lectricity, as well in this as in the other disposition of the apparatus.

(675.) "I repeated all the above experiments with an electric plate, which, besides the sealing wax coated on one side, had a strong coat of varnish on the other side, and their result was similar to those made with the above described plate."

(676.) This is Mr CAVALLO's account of the electrophorus; but there is one part of it in which, Mr Tyler says, (in the last edition of the *Encyclopædia Britannica*,) he must certainly be mistaken. He tells us, that "if instead of laying the electric plate upon the table, it is set upon an electric stand, so as to be accurately insulated, then the metal plate set on it acquires so little electricity, that it can only be discovered by an electrometer." In what manner this gentleman came to mistake a plain fact so egregiously, is not easy to determine; but it is certain, that an electrophorus, instead of having its virtue impaired by being insulated, has it greatly increased, at least the sphere of its activity is greatly enlarged. When lying on the table, if the upper plate is put upon it without being touched with the finger, it will not show much sign of electricity. But as soon as it is put on the electric stand, both the upper and under side appear strongly negative. A thread will be attracted at the distance of 8 or 10 inches. If both the upper and under side are touched at the same time, a strong spark will be obtained from both, but always of the same kind of electricity, namely, the negative kind. If the upper plate is now lifted up, a strong spark of positive electricity will be obtained from it; and on putting it down again, two sparks of negative electricity will be produced.

(677.) "The singularity of this experiment is, that it produces always double the quantity of negative electricity, that it doth of the positive kind; which cannot be done by any other method yet known. Another very surprising circumstance is, that when the electrophorus remains in its insulated situation, you need not always touch the upper and under side of the plates at once, in order to procure positive electricity from the upper plate: it is sufficient to touch both sides only once. On lifting up the upper plate, a spark of positive electricity is obtained as already mentioned. On putting it down again, a spark of the negative kind is obtained from the upper plate, even though you do not touch the lower one. On lifting up the upper plate, a spark of positive electricity is obtained, but weaker than it would have been had both sides been touched at once. Putting down the upper plate again without touching both, a still weaker spark first of negative and then of positive electricity will be obtained from the upper one. Thus the sparks will go on continually diminishing, to the number perhaps of two or three hundred. But at last, when the electricity of the whole machine seems to be totally lost, if both sides are touched at once, it will instantly be restored to its full strength, and the double spark of negative, with the single one of positive electricity, will be obtained without intermission as before.

(678.) "To account for all these phenomena

very particularly, is perhaps impossible, without a greater degree of knowledge concerning the internal fabric of bodies than we have access to attain. In general, however, it is evident, that the phenomena of the electrophorus arise from the disposition that the electric matter hath to keep up an equilibrium within itself throughout every part of the universe. In consequence of this, no motion of the electric matter can be produced upon the one side of the body, but it must immediately be balanced by a corresponding one on the opposite side; and in proportion to the strength of the one, so will the strength of the other be. When the under plate of the electrophorus is excited, the negative electricity or vibratory action of the electric matter towards the excited side, is produced; and the moment that such an action is produced on one side, it is resisted by a similar one on the opposite side, and thus the electrophorus becomes negatively electrified on both sides. As long as the under part of the machine communicates with the earth, the vibratory motion is impeded by the progressive one towards the earth. This makes the resistance on the under side less, and therefore the vibratory motion on the upper part extends but a small way. When the plate is insulated, the electric matter has not an opportunity of escaping to the earth as before, because it is strongly resisted by the air; a vibration therefore takes place on both sides, and extends to a great distance from the plate. When the upper plate is set upon the electrophorus, the same kind of electricity, viz. the negative kind, is communicated to it. When both sides are touched with the finger, or with any other conducting substance, both electricities are suddenly taken off, because the electric matter running along the conducting substance on both sides, puts an end to the vibratory motion in the air, which constitutes the very essence of what we call *electricity*. There is now a quiet and equal balance of the electric matter on both sides, and therefore no signs of electricity are shown. But as soon as the upper plate is taken off, this balance is destroyed. The fluid in the metal plate had not been able to penetrate the electric substance in such a manner as to put a stop to the vibrations of what was within it. As soon then as the plate is taken off, the electricity or vibratory motion towards the electric breaks out at that side. But this motion *inwards* to the electric, which constitutes negative electricity, necessarily becomes *outward* from the plate: and as no motion of the fluid can be produced on one side of the body, but what is immediately communicated to the other, the upper plate becomes electrified positively, and the under one negatively on both sides.

(679.) Professor LICHTENBERG of Gottingen, made an experiment upon the electrophorus, an account of which was first received in London in 1777, and is briefly narrated by Mr Cavallo as follows:

(680.) "The electrophorus is first excited, by rubbing or otherwise; then a piece of metal of any shape, for instance a three-legged compass, a piece of brass tube, or the like, is set upon the electrophorus; and to this a spark is given, of electricity contrary to that of the plate: this done,

the piece of metal is removed by a stick of sealing wax or other electric, and some powder of rosin, kept in a linen bag, is shaken upon the electrophorus. This powder will be found to fall about those points upon the plate, which the piece of metal touched, forming some radiated appearances like stars; at the same time upon the greatest part of the plate, *i. e.* besides those stars, there is hardly any powder at all. Now it is to be remarked, that if the plate be excited negatively, and the spark, given to the metal set upon it, is positive, the appearance will be as above described; but if the plate is positive, and the spark negative, then the powder will fall upon those parts of the plate, which, in the other case, is left uncovered, and leave the stars clean; in short it will be attracted by those parts only of the electrophorus, which are electrified positively.

(681.) "When I first observed these phenomena, I thought that the experiment could be explained only upon the supposition, that the powder of rosin, on its falling from the linen bag was actually electrified negatively; in which case it would have been easy to account for the phenomena, upon the well known principle of bodies contrarily electrified attracting each other, and repelling one another when possessed of the same kind of electricity.

(682.) "In order to try the reality of my supposition, I insulated a brass plate upon a glass stand, and connected a very sensible electrometer with it; then began shaking the powder of rosin upon it, as I had done upon the electrophorus, and in a few seconds had the pleasure to see the electrometer diverge with a very manifest degree of negative electricity, answering my expectation exactly. The explanation of the ingenious Prof. Lichtenberg's experiment now became very clear and natural; for the powder of rosin being actually electrified negatively, could not be attracted except by those parts of the electrophorus which are in a contrary state.

(683.) "This discovery not only affords an explanation of Prof. Lichtenberg's experiment, but shews a method of exciting powders, which has long been a desideratum in the science. The method is as follows: Insulate a metal plate upon an electric stand, and connect with it a cork ball electrometer; then the powder required to be tried, being held in a spoon, or other thing, at about 6 inches above the plate is to be let fall gradually upon it. In this manner the electricity required by the powder being communicated to the metal plate, and to the electrometer, is rendered manifest by the divergence of the threads; and its quantity may be ascertained in the usual manner. See fig 9. Plate CXXXIII.

(684.) "If the powder is of a conducting nature, like the amalgam of metals, sand, &c. it must be held in some electric substance, as a glass phial, a plate of sealing wax, or the like. Sometimes the spoon that holds the powder may be insulated, in which case after the experiment, the spoon will be possessed of an electricity contrary to that of the powder."

(685.) In making these and similar experiments, Mr Cavallo found, that "powder of rosin, whether let fall from paper, glass, or a metal spoon, elec-

electrifies the plate strongly negative; the spoon if insulated remaining positive. Flower of sulphur produces the same effect, but in a less degree. Pounded glass, let fall from a piece of paper made dry and warm, electrifies the plate negatively, but not in so strong a degree as rosin. If let fall from a brass cup, it electrifies the plate positively, but in a very small degree.

(686.) "Steel filings, let fall either from a glass phial or paper, electrify the plate negatively, brass filings positively. The amalgam of tin foil and mercury, gun-powder, or very fine emery, electrify the plate negatively, when let fall from a glass phial. Quick-silver from a glass phial electrifies the plate positively. Soot, or the ashes of pit coals, mixed with small cinders, electrify the plate negatively, when let fall from a piece of paper."

SECT. XV. EXPERIMENTS *showing the EFFECTS of ELECTRICITY on COLOURS.*

(687.) Several interesting experiments have been made by Mr Cavallo upon substances painted over with colours of different kinds. They were occasioned by his having observed that an electric shock, sent over the surface of a card, made a black stroke upon a red spot, from which he was induced to try the effect of sending shocks over cards painted with different water colours. The card employed was generally about one foot and a half of charged glass; and the shocks were sent over the cards while the latter were in a very dry state.

(688.) "Vermilion was marked with a strong black track, about one tenth of an inch wide. The stroke is generally single, as represented by A, fig. 10. Plate CXXXIII. Sometimes it is divided in two towards the middle, like E F; and sometimes, particularly when the wires are set very distant from one another, the stroke is not continued, but interrupted in the middle, like B H. It often, although not always, happens, that the impression is marked stronger at the extremity of that wire from which the electric fluid issues, as it appears at E, supposing that the wire communicates with the positive side of the jar; whereas the extremity of the stroke, contiguous to the point of the wire D, is neither so strongly marked, nor surrounds the wire so much, as the other extremity E.

(689.) "Carmine received a faint and slender impression of a purple colour.

(690.) "Verdigris was shaken off from the surface of the card; except when it had been mixed with strong gum-water, in which case it received a very faint impression.

(691.) "White lead was marked with a long black track, not so broad as that on vermilion. Red lead was marked with a faint mark much like carmine.

(692.) "The other colours I tried were orpiment, gamboge, sap-green, red ink, ultramarine, Prussian blue, and a few others, which were compounds of the above; but they received no impression.

(693.) "It having been insinuated, that the strong black mark, which vermilion receives from the electric shock, might possibly be owing to the great quantity of sulphur contained in that mineral, I was induced to make the following experiment. I mixed together equal quantities of orpiment and flower of sulphur; and with this mixture, by the help, as usual, of very diluted gum-water, I painted a card; but the electric shock sent over it left not the least impression.

(694.) "Desirous of carrying this investigation on colours a little further, with a particular view to determine something relative to the properties of lamp black and oil, I procured some pieces of paper painted on both sides with oil colours; and sending the charge of two feet of coated glass over each of them, by making the interruption of the circuit upon their surfaces, I observed that the pieces of paper painted with lamp black, Prussian blue, vermilion, and purple brown, were torn by the explosion; but white lead, Naples yellow, English ochre, and verdigris, remained unhurt.

(695.) "The same shock sent over a piece of paper painted very thickly with lamp black and oil left not the least impression. I sent the shock also over a piece of paper unequally painted with purple brown, and the paper was torn where the paint lay very thin, but remained unhurt where the paint was evidently thicker. These experiments I repeated several times and with some little variation, which naturally produced different effects; however, they all seem to point out the following propositions.

(696.) "I. A coat of oil paint over any substance, defends it from the effects of such an electric shock as would otherwise injure it; but by no means defends it from any electric shock whatever. II. No one colour seems preferable to the others, if they are equal in substance, and equally well mixed with oil; but a thick coating does certainly afford a better defence than a thinner one.

(697.) "By rubbing the above mentioned pieces of paper, I find that the paper painted with lamp black and oil is more easily excited, and acquired a stronger electricity, than the papers painted with the other colours; and, perhaps, on this account it may be, that lamp black and oil might resist the shock somewhat better than the other paints.

(698.) "It is remarkable, that vermilion receives the black impression, when painted with linseed oil, nearly as well as when painted with water. The paper painted with white lead and oil receives also a black mark; but its nature is very singular. The track, when first made, is almost as dark as that marked on white lead painted with water; but it gradually loses its blackness, and in about an hour (or longer, if the paint is not fresh) it appears without any darkness; and when the painted paper is laid in a proper light, appears only marked with a colourless track, as if made by a finger nail. I sent the shock also over a piece of board, which had been painted with white lead and oil about 4 years before, and the

L 12

explosion

† "It has often been observed, that when lightning has struck the masts of ships, it has passed over such parts of the masts as were covered with lamp black and tar, or painted with lamp black and oil, without the least injury, at the same time that it has shivered the uncoated parts in such a manner as to render the masts useless."

ex-^{position} marked the black track upon this also: this track, however, was not so strong, nor vanished so soon, as that marked upon the painted paper; but in about two days it also vanished entirely."

SECT. XVI. *Of the ACTION of ELECTRICITY on the THERMOMETER, and its PECULIAR EFFECTS in COLD CLIMATES.*

(699.) If a sensible mercurial thermometer be insulated, and the bulb placed between two balls of wood, one fixed to the conductor, the other communicating with the ground, the electric fluid, in passing between the two balls, will raise the mercury in the thermometer considerably. With a cylinder about $7\frac{1}{2}$ inches in diameter, the fluid passing from a ball of lignum vitæ to a ball of beech, and thence to the ground, elevated the quicksilver in the thermometer from 68° to 110° ; repeatedly to 103° . The thermometer was raised from 68° to 85° , by the fluid passing from a point of box to a point of lignum vitæ; from 67° to 100° , from a point of box to a ball of box; from 66° to 100° , from a ball of box to a brass point; from 69° to 100° , from ball to ball; the bulb of the thermometer being covered with a piece of flannel.

(700.) This action of the electric fluid on the thermometer affords an additional proof of the identity of fire, light, and electricity. Indeed if these fluids, which thus alternately, and in so many respects, assume each other's properties, are not the same; experiments are not to be depended upon, and the most obvious rules of philosophizing, adopted and approved by all parties, are no better than specious delusions. To say more on a subject which we have already so fully discussed, (PART II. SECT. II. and III.) may appear superfluous; but it is necessary to accumulate proofs, in order to remove prejudices, and demonstrate the identity of fire, light, and electricity.

(701.) To the many facts and arguments already stated on this subject, we shall add one evidence more from Mr Cavallo:—"Having had occasion, (says he) to coat a ten ounce phial for the Leyden experiment, I stuck the brass filings on the inside of it with varnish.—This phial remained about a week unused, but it happened, that whilst I was charging and discharging it for some experiments, on making a discharge, it exploded with a greater noise than usual, the cork with the wire being at the same time blown out of the neck of it.

(702.) "Being intent upon the main experiments in hand, I omitted to examine this phenomenon; I replaced the cork into the neck of the phial, and went on charging and discharging it again; but it had not been charged above 3 or 4 times more, when, on making a discharge, the varnish that stuck the brass filings was in a flame, which burnt the under side of the cork, and occasioned a good deal of smoke and flame to come out of the phial. Some days after, this experiment was repeated in the presence of 3 gentlemen, well versed in electricity, when the cork with the wire was also pushed out of the neck of the phial; but the varnish was this last time so far burnt, that the brass

filings were almost all dropped to the bottom of the phial, and had their colour changed by the combustion."

(703.) Numberless experiments prove, that electrics are rendered conductors by heat, and that upon abstracting the heat, their electric properties are restored. The atmosphere is a natural electric, but loses its electrical property in a considerable degree, when its heat is great, and becomes a conductor. The following facts mentioned by Mr ÆPINUS in a letter to Dr Guthrie, illustrate this subject, and seem also to confirm Mr Tytler's theory (§ 217, 218.) of the identity of the electric fluid with cold.

(704.) These facts relate to phenomena that are known to take place in Russia, when a great cold has continued for several weeks. Mr Æpinus was sent for by prince ORLOFF, to see an uncommon phenomenon. On going into the prince's apartment, he found him at his toilet, and that, at every time his valet drew his comb through his hair, a pretty strong crackling noise was heard; and on darkening the room, the sparks were following the comb in great abundance, while the Prince was so completely electrified that from sparks could be drawn from his hands and face; nay, he was even electrified by the puff employed in powdering him.

(705.) On another occasion, the Grand Duke of Russia sent for Mr Æpinus one evening in the twilight, and told him, that having briskly drawn a flannel cover off a green damask chair in his bed-chamber, he was astonished at the appearance of a strong bright flame that followed; but considering it as an electrical appearance, he had tried to produce a similar illumination on different pieces of furniture, and could then shew him a beautiful and surprising experiment. He then threw himself on his bed, which was covered with a damask quilt, laced with gold; and rubbing it with his hands in all directions, he appeared to be swimming in fire, as at every stroke flames arose all around him, darted to the gold laced border ran along it, and up to the top of the bed.

(706.) While this experiment was making, prince Orloff came into the room, with a silk muff in his hand, and shewed, that by only waving it 5 or 6 times round his head in the air, he could electrify himself so strongly, as to send off sparks from all the uncovered parts of his body for the inlaid floors had become so dry, as to insulate him completely.

SECT. XVII. *EXPERIMENTS displaying the COHESIVE POWER of ELECTRIFIED SILK.*

(707.) Mr GREY was the first who discovered silk to be an electric, (See § 17, 18.) but as it was not remarkable for emitting sparks, which most commonly engages the attention, its electric virtues were almost entirely overlooked till the year 1759. At that time Mr SYMMER presented to the Royal Society some papers, relating the following very curious experiments made with silk stockings.

(708.) He had been accustomed to wear two pairs of silk stockings; a black pair and a white. When these were put off both together, no signs of electricity appeared; but on pulling off the black

black ones from the white, he heard a snapping or crackling noise, and in the dark perceived sparks of fire between them. To produce these appearances in perfection, it was only necessary to draw his hand several times backward and forward over his leg with the stockings upon it.

(709.) When the stockings were separated and held at a distance from each other, they both appeared to be highly excited; the white stocking positively, and the black negatively. While they were kept at a distance from each other, both of them appeared inflated to such a degree, that they exhibited the entire shape of the leg. When two black or two white stockings were held in one hand, they would repel one another with considerable force, making an angle seemingly of 30 or 35 degrees. When a white and black stocking were presented to each other, they were mutually attracted; and if permitted, would rush together with surprising violence. As they approached, the inflation gradually subsided, and their attraction of foreign objects diminished; but their attraction of one another increased; when they met, they became flat, and joined close together like many folds of silk. When separated again, their electric virtue did not seem to be in the least impaired for having once met; and the same appearances were exhibited by them for a considerable time.

(710.) When the experiment was made with two black stockings in one hand, and two white ones in the other, they were thrown into a strange agitation, owing to the attraction between those of different colours, and the repulsion between those of the same colour. This mixture of attractions and repulsions made the stockings catch each other at greater distances than otherwise they would have done, and afforded a very curious spectacle. When the stockings were suffered to meet, they stuck together with considerable force. At first Mr Symmer found they required from one to 12 ounces to separate them. Another time they raised 17 oz. which was 20 times the weight of the stocking that supported them; and this in a direction parallel to its surface. When one of the stockings was turned inside out, and put within the other, it required 20 ounces to separate them; though at that time 10 ounces were sufficient when applied externally. Getting the black stockings new dyed, and the white ones washed, and whitened in the fumes of sulphur, and then putting them one within the other, with the rough sides together, it required 3 lb. 3 oz. to separate them.

(711.) With stockings of a more substantial make, the cohesion was still greater. When the white stocking was put within the black one, so that the outside of the white was contiguous to the inside of the black, they raised above 8½ lb. and when the two rough surfaces were contiguous, they raised 15 lb. 1½ pennyweights. Cutting off the ends of the thread and the tufts of silk, which had been left in the inside of the stockings, was found to be very unfavourable to these experiments.

(712.) Mr Symmer also observed, that the pieces of white and black silk, when highly electrified, not only cohered with each other, but would also

adhere to bodies with broad and even polished surfaces, though these bodies were not electrified. This he discovered accidentally; having, without design, thrown a stocking out of his hand, which stuck to the paper hangings of the room. He repeated the experiment, and found it continue hanging near an hour. Having stuck up the black and white stockings in this manner, he came with another pair highly electrified; and applying the white to the black, and the black to the white, he carried them off from the wall, each of them hanging to that which had been brought to it. The same experiments held with the painted boards of the room, and likewise with the looking glass, to the smooth surface of which both the white and the black silk appeared to adhere more tenaciously than to either of the former.

(713.) Mr CIGNA of Turin made similar experiments, but with a greater variety of circumstances, upon white and black ribbons. He took two white silk ribbons just dried at the fire, and extended them upon a smooth plain. He then drew over them the sharp edge of an ivory ruler, and found that both ribbons had acquired electricity enough to adhere to the plain; though while they continued there, they showed no other sign of it. When taken up separately, they were both negatively electrified, and would repel each other. In their separation, electric sparks were perceived between them; but when again put on the plain, or forced together, no light was perceived without another friction.

(714.) These effects were the same, whether the smooth plain was an electric or a conducting substance. When they had acquired the negative electricity, if they were placed, not upon the smooth body on which they had been rubbed, but on a rough conducting substance, they would, on their separation, show contrary electricities, which would again disappear on their being joined together. If they had been made to repel each other, and were afterwards forced together, and placed on the rough surface, they would in a few minutes be mutually attracted; the lowermost being positively, and the uppermost negatively electrified. If they received their friction upon the rough surface, they always acquired contrary electricities. The upper one was negatively, and the lower one positively electrified, in whatever manner they were taken off. The same change was instantaneously made by any pointed conductor. If two ribbons were made to repel, and the point of a needle drawn opposite to one of them along its whole length, they would immediately rush together.

(715.) Mr Symmer found that the same operation which produced a change of electricity in a ribbon already electrified, communicated electricity to one which had not as yet received it; viz. laying the unelectrified ribbon upon a rough surface, and putting the other upon it; or holding it parallel to an electrified ribbon, and presenting a pointed conductor to it. He placed a ribbon that was not quite dry under another that was well dried at the fire, upon a smooth plain; and when he had given them the usual friction with his ruler, he found, that in what manner soever they were removed from the plain, the upper one

was negatively and the lower one positively electrified.

(716.) If both ribbons were black, all these experiments succeeded in the same manner as with the white. If, instead of the ivory ruler, he made use of any skin, or a piece of smooth glass, the event was the same; but if he made use of a stick of sulphur, the electricities were in all cases the reverse of what they had been before the ribbons were rubbed, having always acquired the positive electricity. When he rubbed them with paper either gilt or not gilt, the results were uncertain. When the ribbons were wrapped in paper gilt or not gilt, and the friction was made upon the paper laid on the plain above mentioned, both ribbons acquired the negative electricity. If the ribbons were one black and the other white, whichever of them was laid uppermost, and in whatever manner the friction was made, the black generally acquired the negative, and the white the positive electricity.

(717.) Mr SYMMER also observed, that when the texture of the upper piece of silk was loose, yielding, and retiform like that of a stocking, so that it could move and be rubbed against the lower one, and the rubber was of such a nature as could communicate but little electricity to glass, the electricity which the upper piece of silk acquired did not depend upon the rubber, but upon the body on which it was laid. In this case, the black was always negative and the white positive. But when the silk was hard, rigid, and of a close texture, and the rubber of such a nature as would have imparted a great degree of electricity to glass, the electricity of the upper piece depended on the rubber. Thus, a white silk stocking rubbed with gilt paper upon glass became negatively, and the glass positively, electrified. But if a piece of silk of a firmer texture was laid upon a plate of glass, it was *always* electrified positively, and the glass negatively, if it was rubbed with sulphur, and for the most part if it was rubbed with gilt paper.

(718.) An electrified ribbon, when brought near an insulated plate of lead, was attracted, but very feebly. On bringing the finger near the lead, a spark was observed between them, the ribbon was vigorously attracted, and both together showed no signs of electricity. On the separation of the ribbon, they were again electrified, and a spark was perceived between the plate and the finger.

(719.) If several ribbons of the same colour were laid upon a smooth conducting substance, and the ruler was drawn over them, each of them, when taken up singly, gave sparks at the place where it was separated from the other, as did also the last one with the conductor; and all of them were negatively electrified. If they were all taken from the plate together, they cohered in one mass, which was negatively electrified on both sides. If they were laid upon the rough conductor, and then separated singly, beginning with the lowermost, sparks appeared as before, but all the ribbons were electrified positively, except the uppermost.

(720.) If the ribbons received the friction upon the rough conductor, and were all taken up at once, all the intermediate ones acquired the electricity, either of the highest or lowest, according

as the separation was begun with the highest or the lowest. If two ribbons were separated from the bundle at the same time, they clung together, and in that state showed no sign of electricity, as one of them alone would have done. When they were separated, the outermost one had acquired an electricity opposite to that of the bundle, but much weaker.

(721.) When several ribbons were placed upon a plate of metal to which electricity was communicated by means of a glass globe, and a pointed conductor held to the other side of them, they became possessed of the electricity opposite to that of the plate, or of the same, according as they were taken off; except the most remote, which always kept an electricity opposite to that of the plate.

SECT. XVIII. EXPERIMENTS on the COHESIVE and DIFFUSIVE POWERS of ELECTRIFIED GLASS.

(722.) The first person who discovered glass to be electric, was Dr GILBERT. It was long, however, thought to possess but a very weak electric virtue; though now it is found to be one of the best, if not the very best electric yet known.

(723.) Mr SYMMER, when making the experiments above related, concerning electrified glass, was induced to try the cohesive power of electrified glass. He got two panes of the thinnest and smoothest window glass he could procure. He coated one of the sides with tin foil, leaving a space uncovered near the edges. The uncovered sides were then put together, and electricity communicated to one of the coatings by a machine. In consequence of this, the one side which was also coated, became electrified with an electricity opposite to the first, and both panes were charged with the electric power, as if they had been charged one. After they had received a considerable degree of electric power, they cohered pretty strongly together, but he had no apparatus by which the strength of their cohesion could be measured. He then turned the plates upside down; and discharging from his machine positive electricity on the negative side of the glass, both panes were immediately discharged, and their cohesion ceased. Placing two panes of glass, each of them coated on both sides, one upon the other, each of them had a positive and negative side, by communicating electricity to one of them, and they did not cohere.

(724.) In consequence of Mr Symmer's experiments, Sig. BECCARIA made the following: Having charged a coated plate of glass, he took off the coating from the negative side, and applied another uncoated and unelectrified plate of glass close to it. After this, putting a coating upon the latter (so that the whole resembled one coated plate consisting of two laminæ), he made a communication between the two coatings. The consequence of this was an explosion, a discharge of the positive and negative electricity, and a cohesion of the plates. If the plates were separated before the explosion, after they had been in contact for some time, the charged plate was positive on both sides, and the uncharged one negative on both sides. If after the explosion he separated and joined them alternately, a small circle

of paper, placed under the uncharged plate, adhered to it upon every separation, and was thrown off again upon every conjunction. This could be repeated 500 times after once charging the plate.

(725.) This last experiment was made at Pekin, before it was repeated by Sig. Beccaria. When in these experiments, the charged plate was inverted, and the positive side applied to the uncharged plate, all the effects were exactly the reverse of the former. If it was inverted ever so often, after remaining some time in contact with the uncharged plate, it would produce a change in the electricity. In the dark, a light was always seen upon the separation of these plates. Laying the two plates together like one, and coating the out-sides of them, he discharged them both together; and at the distance of about 4 feet he distinguished six of the coloured rings mentioned by Sir ISAAC NEWTON, all parallel to one another, and nearly equal to the edge of the coating. At the angles of the coatings the rings spread to a greater distance. Where the coatings did not quite touch the glass, the rings bent inwards; and where the coatings adhered very close, they retired farther from them. Upon discharging these two plates, the coloured rings vanished, and the electric cohesion ceased.

(726.) On separating the plates before the explosion; that which had received the positive electricity was positive on both sides, and the other negative on both sides. If they were separated after the explosion, each of them was affected in a manner quite the reverse. Upon inverting the plates, that which was the thinner appeared to be possessed of the stronger electricity, and sought the other plate to correspond with it. Charging the two plates separately, and taking off some of the coatings, so that two positive or two negative sides might be placed together, there was no cohesion nor explosion. But joining a positive of a negative side, they immediately cohered; and a communication being formed on the outside, there was an explosion which increased the cohesion.

(727.) These experiments were repeated with success, by Mr HENLY, when he used plates of looking glass, or window and crown glass; but when two plates of Nuremberg glass, commonly called DUTCH PLATES were used, the result was very different. Each of the plates, when separated after charging, had a positive and a negative surface. When they were replaced, and a discharge made, by forming a communication between the two coatings, the electricity of all the surfaces was changed. It appeared, however, still to be very strong, and the plates continued to give repeated flashes of light when they were alternately closed, touched, and separated, like the others. If a clear, dry, uncoated plate of looking glass was placed between the coated plates, either of looking glass or crown glass, before they were charged, that uncoated plate was always bound, upon separating them after charging, to be electrified negatively on both sides; but if it was put between the Dutch plates, it acquired, like them, a positive and a negative electricity.

(728.) Mr BESINUS made the following remarkable experiments:—He pressed close together two

pieces of looking glass, each containing some square inches; and found, that when they were separated, and not suffered to communicate with any conductor, they acquired a strong electricity, the one positive and the other negative. When put together again, the electricity of both disappeared; but not if either of them had been deprived of their electricity when they were asunder; for in that case, the two, when united, had the electricity of the other. These are the most remarkable experiments, that have been made with electrified flat plates of glass.

(729.) GLASS TUBES, however, afford a variety of curious phenomena of a different nature. One very remarkable one is the conducting power of new flint glass, which is most easily perceived in tubes, and on which Dr PRIESTLEY makes the following observations: He several times got tubes made 2 or 3 yards long, terminating in solid rods. These he took almost warm from the surface, in the finest weather possible; and having immediately insulated them, perceived that the electricity of a charged phial would presently diffuse itself from one end to the other; and this he supposed would have been the case at any distance at which the experiment could have been made. When the same tubes were a few months older, the electricity could not be diffused along their surface farther than half a yard.

(730.) Dr PRIESTLEY then tried the diffusive power of glass in a different manner. A tube was procured of about 3 feet long, but of very unequal width. About 3 inches of the middle part of it were coated on both sides. This coated part was afterwards charged, by communicating electricity to the inside of it by means of a wire. The consequence was, that not only the part through which the wire was introduced became strongly electrified on the outside, but at the opposite end, where there was neither coating nor wire, the fire crackled under the fingers as the tube was drawn through the hand, and a flame seemed continually to issue out of both ends, while it was at rest and charged. One end of this tube was broken and rough; the other was smooth.

(731.) The Dr procured another tube about $3\frac{1}{2}$ feet in length, and very thin. It was about an inch in diameter, and closed at one end. Three inches of it were coated on both sides, about 9 inches below the mouth. This part being charged, the whole tube, to the very extremity, was strongly electrical, crackling very loud when the hand was drawn along it, and emitting sparks at about an inch distance all the way. After drawing the whole tube through the hand, all the electricity on the outside was discharged; but on putting a finger into the mouth, a light streamed from the coating, both towards the finger and towards the opposite end of the tube. After this, all the outside of the tube was become strongly electrical as before; and this electricity might be taken off and recovered many times without charging the tube anew, only it was weaker each time. Holding this tube by the coated part, and communicating electricity to the uncoated outside, both sides became charged; and upon introducing a wire, a considerable explosion was made. The discharge made the outside strongly electrical, and

by taking off this electricity, the tube became sensibly charged. The residuum of these charges was very considerable; and in one tube, there was a residuum after 20 or 30 discharges.

(732.) Upon being kept 6 or 7 months, most of the tubes employed in these experiments lost the above mentioned properties, and the electricity could no longer diffuse itself upon their surfaces. At length they were all broken except one, which had been the most remarkable of the whole. With this old tube, the Doctor tried to repeat the above experiments; but to no purpose. He then took it to a glass-house; and having made it red all over, its diffusive property was restored. He then tried two other tubes which had been made about six weeks, but not used, and they answered exactly as if they had been quite new. The charge from a small coated part diffused itself all over the tube; so that, at the distance of a yard from the coating, it gave sparks to the finger of an inch long.

(733.) On this occasion, when Dr PRIESTLEY brought his finger to the tube about two inches above the coating, a great quantity of the diffusing electricity was discharged; and his whole arm was violently shocked. The old tube, after being heated as above mentioned, showed a prodigious diffusive power. Upon charging a small coated part, the electricity was diffused to the end of the tube; and it gave sparks at the distance of an inch over every part of it. When it was drawn through the hand, in order to take off the diffused electricity, it instantly returned again, and the extremity of the tube was highly electrified, even while its communication with the coating was cut off by the hand. The middle part of the tube also, which had been ofteneft heated, had a much greater diffusive power than any other. It was no sooner taken off, than it appeared again; so that it gave a continual stream of fire. The quantity of the residuum after a discharge of this tube was prodigious; so that the outside coating would immediately after give almost a constant stream of fire, for some time, to any conducting substance placed near it. The Dr also observed, that in all the tubes which had the diffusion, there was a considerable noise at the orifice, when his hand was drawn from the extremity towards the coating, as if the tube had been gradually discharging itself. In the dark, the electric matter seemed perpetually to pour from the open end, or both ends if they were open; and whenever his hand was drawn over it, the fire streamed from the coating to his hand in a very beautiful manner. The first time he charged any of these tubes after they had stood a while, the diffusion was the most remarkable. It was lessened by every successive charge, and at last became exceedingly small; but after the tube had stood a few hours unchanged, it was as vigorous as ever.

(734.) Mr CAVALLO has also made some curious discoveries concerning glass tubes. He took the hint from observing accidentally, that by agitating quick silver in a glass tube hermetically sealed, and in whose cavity the air was very much rarefied, the outside of the tube was sensibly electrified. The electricity, however, was not constant, nor in proportion to the agitation of the

quicksilver. To ascertain the properties of these tubes, he constructed several of them, one of which is represented, *fig. 3, Plate CXXXIII.* Its length was 31 inches, and its diameter something less than half an inch. The quicksilver contained in it was about three 4ths of an ounce; and in order to exhaust it of air, one end of it was closed, while the quicksilver boiled in the other. Before the tube is used, it must be made a little warm and cleaned; then, holding it nearly horizontal, the quicksilver in it is suffered to run from one end to the other, by gently and alternately elevating and depressing its extremities. This operation immediately renders the outside electrical, but with the following remarkable property, viz. that the end of the tube where the quicksilver actually stands is always positive, and all the remaining part of it negative. If elevating this positive end of the tube a little, the quicksilver runs to the opposite end which was negative, then the former instantly becomes negative, and the latter positive. The positive end has always a stronger electricity than the negative. If when one end of the tube, for instance A, is positive, *i. e.* when the quicksilver is in it, that electricity is not taken off by touching it; then, on elevating this end A, that the quicksilver may run to the opposite end B, it appears negatively electrified in a very small degree. If by depressing it again it is a second time rendered positive, and that positive electricity is not taken off, then, on elevating the end again, it appears positive in a small degree. If, whilst it is positive, its electricity is taken off, then on being elevated, it appears strongly negative. When about two inches of each extremity of this tube is coated with tin foil, the electricity at the extremities are rendered more perceptible, so that sometimes they will give sparks to a conductor brought near them. Tubes, whose glass is about one 20th of an inch thick, answer best for these experiments than any others.

SECT. XIX. Of the VINDICATING ELECTRICITY.

(735.) The remarkable phenomena above described, (§ 723—726,) exhibited by the flat plates of glass jointly charged, are explained by the celebrated Sig. BECCARIA, as well as other singular phenomena of charged and excited electricity upon the following principle, which he distinguished by the name of VINDICATING ELECTRICITY. "When two bodies, either a conductor and electrified electric, or two contrarily and equally electrified electrics, are joined together, they adhere to each other, and the electricities disappear; but as soon as they are separated, the electrics recover their electricity." *Becc. Artific. Electricit. Part II. Sect. vi.*

(736.) Mr CAVALLO, in the 1st and 2d editions of his treatise, seems to doubt "how far this principle can be of use to explain the phenomena of charged glass;" and to think Mr Henly's experiments with the Dutch plates above described (§ 727.) "not conformable to F. BECCARIA's theory." In the appendix to his 2d vol. however, in his two last editions, he appears to adopt it, and gives the following account of an experiment in illustration of it:

(737.) "I. A B, *a b*, fig. 11. plate CXXXIII. represents a plate of glass, coated on both sides with two metallic coatings C D, *c a*, which are not stuck to the glass plate, but are only laid upon it.

(738.) "From the upper coating C D, three silk threads proceed, which are united at their top H, by which the said coating may be removed from the plate in an insulated manner, and may be presented to an electrified electrometer, as represented in fig. 7, in order to examine its electricity. F G is a glass stand, which insulates and supports the plates, &c.

(739.) "II. Let the plate A B, *a b*, be charged in the common manner, by means of an electrical machine, so that its surface A B may acquire one kind of electricity, (which may be called K) and the opposite surface *a b* may acquire the contrary electricity, (which we shall call L). Then, if the coating C D be removed from the plate, and be presented to an electrified electrometer, as represented in fig. 12, it will be found possessed of the electricity K, viz. of the same kind with that which has communicated to the surface A B of the glass plate; from whence it is deduced, that the surface A B has imparted some of its electricity to the coating. Now, this disposition of the charged plate to give part of its electricity to the coating, what the learned F. BECCARIA nominates the POSITIVE VINDICATING ELECTRICITY.

(740.) "III. If the coating be again and again alternately laid upon the plate and removed, its electricity K will be found to decrease gradually, after a number of times (which is greater or less, according as the edges of the plate insulate more or less exactly) the coating will not appear electrified. This state is called the limit of the two contrary electricities; for if now the above mentioned operation of coating and uncoating the plate be continued, the coating will be found possessed of the contrary electricity, viz. the electricity L. This electricity L of the coating is weak on its first appearance, but it gradually grows stronger and stronger to a certain degree; then insensibly decreases, and continues decreasing until the glass plate has entirely lost every sign of electricity.

(741.) "By this change of electricity in the coating, it is deduced, that the surface A B of the plate changes property; and whereas at first

it was disposed to part with its electricity, now (viz. beyond the limit of the two contrary electricities) it seems to vindicate its own property; that is, to take from the coating some electricity of the same kind with that of which it was charged; hence, this disposition was by F. BECCARIA called the POSITIVE VINDICATING ELECTRICITY.

(742.) "IV. This positive vindicating electricity never changes, though the coating be touched every time it is removed. It appears stronger, and continues for a very considerable time after the plate has been discharged; which is a very surprising property of glass, and probably of all good and solid electrics.

(743.) "V. If, soon after the discharge of the plate, the coating be alternately taken from the plate, and replaced, but with the following law, viz. that when the coating is upon the plate, both coatings be touched at the same time, and when the coating is off, this be either touched or not; then the surface A B of the plate, on being uncoated every time, takes a quantity of electricity which it alternately loses every time it is coated.

(744.) "VI. On removing the coating in a dark room, a flash of light appears between it and the glass, which is still more conspicuous, if the coating be removed by the finger being applied immediately to it, viz. not in an insulated manner; because, when the coating is not insulated, the glass plate can give to, or receive from it, more of the electric fluid, and that more freely, than otherwise.

(745.) "VII. It is observable, that in the negative vindicating electricity, the glass loses a greater or less proportion of electricity, in an inverse proportion of the charge given to the plate, viz. the part lost is greater when the charge has been the weaker; for in the positive vindicating electricity, the force of receiving electricity is stronger, when the charge has been stronger, and contrariwise.

(746.) "VIII. If, after every time that the coating C D is removed, the atmospheres E, *e*, that is, the air contiguous to the surface of the glass plate, be examined, they will be found electrified as in the following table, viz. the threads of an electrometer, brought within one or two inches, or more, of the surfaces A B, *a b*, will diverge with electricities contrary to those expressed in the table.

"During the time	{ the air E, if { moderately	{ moderately L
of the negative vin-	{ the plate has { high - - -	{ o
dicator Electricity	{ been charged { very high -	{ moderately K
ty	{ the air <i>e</i> is electrified L.	

"During the time of the po-	{ the air E }	{ are electrified L.
sitive vindicating Electricity	{ the air <i>e</i> }	

(747.) "IX. Although we are not acquainted with the cause of vindicating electricity, any farther than to consider it as a disposition or property of charged glass, yet the phenomena of the electricities of the air, contiguous to the surfaces of the plate, seem to be a proper consequence of Dr FRANKLIN'S theory of electricity,

and are accountable by it; for it is a well known principle of that theory, that when one side of a coated electric, fit to receive a charge, acquires a greater quantity of electricity than the opposite side can acquire of the contrary electricity, then both sides of that electric appear possessed of the same kind of electricity, namely, of that commu-

M m

nicated

† "This may be proved by touching an insulated electrometer with the coating, when this is standing upon the plate, and when separated from it."

icated to the first mentioned side. Now, when in the negative vindicating electricity, the surface A B of the glass plate gives part of its electricity to the coating, then the other side $a b$, being more electrified L, than the side A B is electrified K, it is plain that, according to the said principle, both sides must appear electrified L. But in the positive vindicating electricity, the side A B of the glass plate receives some electricity of the kind K from the coating, therefore both sides must affect the air with electricity K.

(748.) "X. There remains only to be explained the reason why, when the plate has received a high charge, the air E, during the time of the negative vindicating electricity, appears electrified K, whilst the air e is electrified L. In order to render this explanation more intelligible, let us suppose the glass plate to have been electrified positively on the side A B; then in the negative vindicating electricity, the surface A B, on being uncoated, loses a part of its electricity, which is so much the greater as the charge has been the less (§ VII.); therefore, when the charge has been moderate, A B loses a greater portion of electric fluid, than that which the air e can supply the surface $a b$; hence the surface $a b$ will remain more negatively electrified than the surface A B is positively; consequently, according to the above mentioned principle, (§ IX.) both the atmospheres E, e , must appear in a negative state when the charge has been a certain degree higher; then the surface A B, on being uncoated, loses just so much of the electric fluid as the air e can give to $a b$, therefore the air will not appear electrified. But when the charge has been very high, A B loses a smaller portion of electric fluid than the air e can give to $a b$; therefore e , by having given some of its natural electric fluid to $a b$, will appear negative; and E will appear positive in a small degree. If the plate be supposed to have been charged negatively on the side A B, the explanation of the phenomena is the same, changing only the name of *positive* electricity into *negative*, &c.

(749.) "XI. This property of charged glass, called vindicating electricity, is observable also when two glass plates, laid one over the other, and coated on their outward surfaces only, are charged jointly like one plate. Suppose A B, C D, fig. 13, to represent the two plates charged together, viz. by having presented the coating F to the prime conductor, and having at the same time connected the coating G with the ground, in which state, it is easy to conceive, that the upper surface of the plate A B would be positive, its under surface would be negative, the upper surface of the plate, C D, viz. the surface contiguous to the plate A B, would be positive, and its opposite surface G would be negative. Now, if these plates, after having been charged, be alternately separated and joined, without ever touching their coatings, it is plain that their surfaces, contiguous to one another, whenever the plates are separated, will uncoat each other, consequently the phenomena of vindicating electricity will take place, that is, each of the inside or naked surfaces, when the plates are first separated, will lose part of its electricity. This lost electricity gradually decreases till it vanishes, after which period, each of the said surfaces will gradually recover part of its lost electricity, &c.

(750.) "XII. By the principle noticed above, (§ IX.) when one surface of either plate has acquired a quantity of one kind of electricity more than the opposite surface has acquired of the other, then both surfaces of that plate must appear possessed of that and the same kind of electricity; hence it follows, that when the plates A B, C D, are at first separated for a certain number of times, i. e. during the negative vindicating electricity, the plate A B must appear positive on both sides, and the plate C D negative on both sides; but after the limit of the two contrary electricities, when the positive vindicating electricity has taken place, then the plate A B will appear negative on both sides, and the plate C D positive on both sides.

(751.) "XIII. The adhesion of the plates to one another keeps pace with the vindicating electricity: so that it is very strong at first, but gradually decreases with the negative vindicating electricity till it becomes insensible; but after the limit, the two contrary electricities it appears again, and then it increases and decreases with the positive vindicating electricity.

(752.) "XIV. Every other particular relating to the phenomena of vindicating electricity, exhibited with one plate, does also take place in experiment with two plates; except the phenomena considered above (§ X.), which the plates cannot exhibit, on account that they are not capable of receiving a very high charge, a single plate is; which high charge is absolutely necessary to produce that appearance."

SECT. XX. EXPERIMENTS respecting the VINDICATION OF THE ELECTRIC FLUID.

(753.) The motions of the electric fluid, the prodigiously quick, are not instantaneous. A shock of the Leyden phial, indeed, has been transmitted through wires of several miles in length without taking up any sensible space of time. If two persons hold the ends of the wire, one communicating with the knob, and the other with the outside coating of the phial, both would feel a shock at the same instant; nor would it make any alteration though a considerable part of the surface of the ground was made part of the conductor.

(754.) Dr PRIESTLEY relates several very curious experiments made to ascertain this point after the Leyden phial was discovered. These were planned and directed by Dr Watson, who was present at all of them. His chief assistants were Martin Folkes, Esq. president of the Royal Society, Lord Charles Cavendish, Dr Bevis, Mr Graham, Dr Birch, Mr Peter Daval, Mr Trembley, Mr E. cott, Mr Robins, and Mr Short. Many other eminent persons gave their attendance occasionally. Dr WATSON, who wrote the history of their proceedings, in order to lay them before the Royal Society, begins with observing (what was verified in all their experiments,) that the electric shock, not, strictly speaking, conducted in the shortest manner possible, unless the bodies through which it passes conduct equally well; for that, if the conduct unequally, the circuit is always formed through the best conductor, though the length of it be ever so great.

(755.) Their first attempt was to convey the electric shock across the river Thames, making use

of the water of the river for one part of the chain of communication. This they accomplished on the 14th and 18th of July, 1747, by fastening a wire all along Westminster bridge, at a considerable height above the water. One end of this wire communicated with the coating of a charged phial, the other being held by an observer, who, on the other hand, held an iron rod, which he dipped into the river. On the opposite side of the river stood a gentleman, who likewise dipped an iron rod in the river with one hand; and in the other held a wire, the extremity of which might be brought into contact with the wire of the phial. (764.) The shock, upon making the discharge, was felt by the observers on both sides the river, more sensibly by those who were stationed on the same side with the machine; part of the electric fire having gone from the wire down the moist sides of the bridge, thereby making several shorter circuits to the phial, but still all passing through the gentlemen who were stationed on the same side with the machine. This was, in a manner, manifested by some persons feeling a sensible tick in their arms and feet, who only happened to touch the wire at the time of one of the discharges, when they were standing upon the wet ground which led to the river. In one of the discharges made upon this occasion, spirits were kindled by the fire which had gone through the wire. The gentlemen made use of wires in preference to chains, as communicating a stronger degree of electricity.

(757.) Their next attempt was to cause the electricity to make a circuit of two miles, at the New River at Stoke Newington. This they performed on the 24th July, 1747, at two places; at one of which the distance by land was 800 feet, and by water 2000; in the other, the distance by land was 1800 feet, and by water 8000. The disposition of the apparatus was similar to what they had before used at Westminster bridge, and the effect answered their utmost expectations. But in both cases, the observers at both extremities of the chain, which terminated in the water, felt the shock as well when they stood with their feet fixed into the earth 20 feet from the water, when they were put into the river; it occasioned a doubt, whether the electric circuit was formed through the windings of the river, or a much shorter way, by the ground of the meadow: for the experiment plainly showed, that the meadow-ground, with the grass on it, conducted the electricity very well.

(758.) From subsequent experiments they were convinced, that the electricity had not in this manner been conveyed by the water of the river; which was 2 miles in length, but by land, where the distance was only one mile; in which space, however, the electric matter must necessarily have passed over the New River twice, have gone through several gravel pits, and a large stubble field.

(759.) On the 28th July, they repeated the experiment at the same place, with the following variation of circumstances. The iron wire was, in its whole length, supported by dry sticks, and the observers stood upon original electrics; the effect was, that they felt the shock much more sensibly

than when the conducting wire had lain upon the ground, and when the observers had likewise stood upon the ground, as in the former experiment. Afterwards, every thing else remaining as before, the observers were directed, instead of dipping their rods into the water, to put them into the ground, each 150 feet from the water. They were both smartly struck, though they were distant from each other above 500 feet.

(760.) Their next object was to determine whether the electric virtue could be conveyed through dry ground; and, at the same time, to carry it through water to a greater distance than they had done before. For this purpose they pitched upon Highbury Barn beyond Islington, where they carried it into execution on the 5th August, 1747. They chose a station for their machine almost equally distant from two other stations, for observers: upon the New River, which were somewhat more than a mile asunder by land and two miles by water. They had found the streets of London, when dry, to conduct very strongly for about 40 yards; and the dry road at Newington about the same distance. The event of this trial answered their expectations. The electric fire made the circuit of the water, when both the wires and the observers were supported upon original electrics, and the rods dipped into the river. They also both felt the shock, when one of the observers was placed in a dry gravelly pit, about 300 yards nearer the machine than the former station, and 100 yards distant from the river: from which the gentlemen were satisfied, that the dry gravelly ground had conducted the electricity as strongly as water.

(761.) From the shocks which the observers received, when the electric power was conducted upon dry sticks, they were of opinion, that, from the difference of distance simply considered, the force of the shock, as far as they had yet experienced, was very little if at all impaired. When they stood upon electrics, and touched the water or the ground with the iron rods, the shock was always felt in their arms or wrists; when they stood upon the ground with their iron rods, they felt the shock in their elbows, wrists, and ankles; and when they stood upon the ground without rods, the shock was always felt in the elbow and wrist of that hand which held the conducting wire, and in both ankles.

(762.) The last investigation which these gentlemen made on this subject, and which required all their sagacity and address in the conduct of it, was to try whether the electric shock was perceptible at twice the distance to which they had before carried it, in ground perfectly dry, and where no water was near; and also to distinguish, if possible, the respective velocity of electricity and sound. For this purpose they fixed upon Shooter's Hill, and made their first experiments on the 14th Aug. 1747; a time when, as it happened, but one shower of rain had fallen during five preceding weeks. The wire communicating with the iron rod which made the discharge, was 6732 feet in length, and was supported all the way upon baked sticks: as was also the wire which communicated with the coating of the phial, which was 3868 feet long, and the observers were distant from each other two miles.

flap: so that a continual stream of electricity passed through an insulated metallic bow terminating in balls, which were opposed, the one to the surface opposite the extremity of the silk, and the other opposite to the cushion; the former ball showing positive and the latter negative signs. The knobs of two jars being substituted in the place of these balls, the jar applied to the surface opposed to the cushion was charged negatively, and the other positively. This disposition of the back surface seemed, by a few trials, to be weaker the stronger the action of the cushion, as judged by the electricity on the cushion side.

(784.) "Hence it follows, that the internal surface of a cylinder is so far from being disposed to give out electricity during the friction by which the external surface acquires it, that it even greedily attracts it.

(785.) "13. A plate of glass was applied to the revolving plate, and thrust under the cushion in such a manner as to supply the place of the silk flap. It rendered the electricity stronger, and appears to be an improvement of the plate machine; to be admitted if there were not essential objections against the machine itself.

(786.) "14. Two cushions were then applied on the opposite surfaces with their silk flaps, so as to clasp the plate between them. The electricity was received from both by applying the finger and thumb to the opposite surfaces of the plate. When the finger was advanced a little towards its correspondent cushion, so that its distance was less than between the thumb and its cushion, the finger received strong electricity, and the thumb none; and, contrariwise, if the thumb were advanced beyond the finger, it received all the electricity, and none passed to the finger. This electricity was not stronger than was produced by the good action of one cushion applied singly.

(787.) "15. The cushion, in experiment 12, gave most electricity when the back surface was supplied, provided that surface was suffered to retain its electricity till the rubbed surface had given out its electricity.

(788.) "From the two last paragraphs it appears, that no advantage is gained by rubbing both surfaces; but that a well managed friction on one surface will accumulate as much electricity as the present methods of excitation seem capable of collecting; but that, when the excitation is weak, on account of the electric matter not passing with sufficient facility to the rubbed surface, the friction enables the opposite surface to attract or receive it, and if it be supplied, both surfaces will pass off in the positive state; and either surface will give out more electricity than is really induced upon it, because the electricity of the opposite surface forms a charge. It may be necessary to observe, that I am speaking of the facts or effects produced by friction; but how the rubbing surfaces act upon each other to produce them, whether by attraction or otherwise, we do not here enquire.

(789.) "It will hereafter be seen, that plate machines do not collect more electricity than cylinders (in the hands of the electrical operators of this metropolis) do with half the rubbed surface;

which is a corroboration of the inference here made.

(790.) "16. When a cylinder is weakly excited, the appearances mentioned (par. 8.) are more evident the more rapid the turning. In this case, the avidity of the surface of the cylinder beneath the silk is partly supplied from the edge of the silk, which throws back a broad cascade of fire, sometimes to the distance of above 12 inches. From these causes it is, that there is a determinate velocity of turning required to produce the maximum of intensity in the conductor. The stronger the excitation, the quicker may be the velocity; but it rarely exceeds five feet of the glass to pass the cushion in a second.

(791.) "17. If a piece of silk be applied to a cylinder, by drawing down the ends so that it may touch half the circumference, and the cylinder be then turned and excited by applying the amalgamated leather, it will become very greedy of electricity during the time it passes under the silk. And if the entering surface of the glass be supplied with electricity, it will give it out at the other extremity of contact; that is to say, if insulated conductors be applied at the touching ends of the silk, the one will give and the other receive electricity, until the intensities of their opposite states are as high as the power of the apparatus of bringing them; and these states will be instantly reversed by turning the cylinder in the opposite direction.

(792.) "As this discovery promises to be of the greatest use in electrical experiments, because it affords the means of producing either the plus or minus states in one and the same conductor, and of instantly repeating experiments with either power, and without any change of position or adjustment of the apparatus, it evidently deserves the most minute examination.

(793.) "18. There was little hope (par. 6.) the cushions could be dispensed with. They were therefore added; and it was then seen, that the electrified conductors were supplied by the difference between the action of the cushion which had the advantage of the silk, and that which had not; so that the naked face of the cylinder was always in a strong electric state. Methods were used for taking off the pressure of the receiving cushion; but the extremity of the silk, by the construction, not being immediately under that cushion, gave out large flashes of electricity with less power that was used. Neither did it appear practicable to present a row of points or other apparatus to intercept the electricity which flew round the cylinder; because such an addition would have materially diminished the intensity of the conductor, which in the usual way was such as to flash into the air from rounded extremities of a 4 inch diameter, and made an inch and half ball become luminous and blow like a point. But the greatest inconvenience was, that the two states with the backward and forward turn were seldom equal, because the disposition of the amalgam on the silk produced by applying the leather to the cylinder in one direction of turning; was the reverse of what must take place when the contrary operation was performed. Notwithstanding all this, the

the intensity was such as most operators would have called strong.

(794.) "19. The more immediate advantage of this discovery is, that it suggested the idea of two fixed cushions with a moveable silk flap and rubber. Upon this principle, which is so simple and obvious, that it is wonderful it should have been so long overlooked, I have constructed a machine with one conductor, in which the two opposite and equal flates are produced by the simple process of loosening the leather rubber, and letting a pair round with the cylinder (to which it adheres) until it arrives at the opposite side, where it is again fastened. A wish to avoid prolixity prevents my describing the mechanism by which it is let go and fastened in an instant, at the same time that the cushion is made either to press or is withdrawn, as occasion requires.

(795.) "20. Although the foregoing series of experiments naturally lead us to consider the silk as the chief agent in excitation; yet as this business was originally performed by a cushion only, it becomes an object of enquiry to determine what appears in this case.

(796.) "21. The great BECCARIA inferred, that in a simple cushion, the line of fire, which is at the extremity of contact from which the surface of the glass recedes, consists of returning electricity; and Dr NOOTH grounded his happy conception of the silk flap upon the same supposition. The former asserts, that the lines of light at the entering and departing parts of the surface are absolutely similar; and thence infers, that the cushion receives on the one side, as it certainly does on the other. I find, however, that the fact is directly contrary to this assertion; and that the opposite inference ought to be made, as this indication can be reckoned conclusive: the entering surface exhibits many luminous perpendiculars to the cushion, and the departing surface exhibits a neat uniform line of light. This circumstance, together with the consideration that the line of light behind the silk, in par. 8, could consist of returning electricity, showed the necessity of farther examination. I therefore applied the edge of the hand as a rubber, and by occasionally bringing forward the palm, I varied the quantity of electricity which passed near the departing surface. When this was the greatest, the sparks at the electrometer were the most numerous.

But as the experiment was liable to the objection that the rubbing surface was variable, I fixed a piece of leather upon a thin flat piece of wood, then amalgamated its whole surface, and cut the extremity off in a neat right line close to the wood. This being applied by the constant action of a spring against the cylinder, produced a weak excitation; and the line where the contact of the hand and leather ceased (as abruptly as possible) exhibited a very narrow fringe of light. Another piece of wood was prepared of the same width as the rubber, but one quarter of an inch thick, with its edges rounded, and its whole surface covered with tin foil. This was laid on the back of the rubber, and was there held by a small spring, in such a manner as that it could be slid on ward, so as occasionally to project beyond the rubber, and cover the departing and excited surface of the

cylinder without touching it. The sparks at the electrometer were four times as numerous when this metallic piece was thus projected; but no electricity was observed to pass between it and the cylinder. The metallic piece was then held in the hand to regulate its distance from the glass; and it was found, that the sparks at the electrometer increased in number as it was brought nearer, until light appeared between the metal and the cylinder; at which time they became fewer the nearer it was brought, and at last ceased when it was in contact.

(797.) "The following conclusions appear to be deducible from these experiments. 1. The line of light on a cylinder departing from a simple cushion consists of returning electricity: 2. The projecting part of the cushion compensates the electricity upon the cylinder, and by diminishing its intensity prevents its striking back in such large quantities as it would otherwise do: 3. That if there was no such compensation, very little of the excited electricity would be carried off: And, 4. That the compensation is diminished, or the intensity increased, in an higher ratio than that of the compensating substance; because if it were not, the electricity which has been carried off from an indefinitely small distance, would never fly back from a greater distance and form the edge of light.

(798.) "22. I hope the considerable intensity I shall speak of will be an apology for describing the manner in which I produce it. I wish the theory of this very obscure process were better known; but no conjecture of mine is worth mentioning. The method is as follows:

(799.) "Clean the cylinder and wipe the silk. Grease the cylinder by turning it against a greased leather till it is uniformly obscured. I use the tallow of a candle. Turn the cylinder till the silk flap has wiped off so much of the grease as to render it semitransparent. Put some amalgam on a piece of leather, and spread it well, so that it may be uniformly bright. Apply this against the turning cylinder. The friction will immediately increase, and the leather must not be removed until it ceases to become greater. Remove the leather and the action of the machine will be very strong."

(800.) Mr Nicholson then describes his rubber, (See § 303, 307.) and recommends Dr Higgins's amalgam, (§ 305.) after which he adds, "A very strong excitation may be produced by applying the amalgamated leather to a clean cylinder with a clean silk: but it soon goes off, and is not so strong as the foregoing, which lasts several days.

(801.) "23. To give some distinctive criterions by which other electricians may determine whether the intensity they produce exceeds or falls short of that which this method affords, I shall mention a few facts.

(802.) "With a cylinder 7 inches diameter, and cushion 8 inches long, three brushes at a time constantly flew out of a 3 inch ball in a succession too quick to be counted, and a ball of an inch and a half diameter was rendered luminous, and produced a strong wind like a point. A 9 inch cylinder with an 8 inch cushion occasioned frequent flashes from the round end of a conductor 4 inches diameter:

diameter: with a ball of 2 and a half inches diameter the flashes ceased now and then, and it began to appear luminous: a ball of an inch and a half diameter first gave the usual flashes; then, by quicker turning, it became luminous with a bright speck moving about on its surface, while a constant stream of air rushed from it; and, lastly, when the intensity was greatest, brushes of a different kind from the former appeared. These were less luminous but better defined in the branches; many started out at once with a hoarse sound. They were reddish at the stem, sooner divided, and were greenish at the point next the ball, which was brass. A ball of 4 10ths of an inch diameter was surrounded by a steady faint light, enveloping its exterior hemisphere, and sometimes a flash struck out at top. When the excitation was strongest, a few flashes struck out sideways. The horizontal diameter of the light was longest, and might measure one inch, the stem of the ball being vertical.

(803.) "This last phenomenon is similar to a natural event related by Mr LOAMMI BALDWIN;" (see § 544.) as well as "to another observed by M. de Saussure on the Alps, and both are referable to my luminous ball with the second kind of brush. The cloud must have been negative.

(804.) "With a 12 inch cylinder and rubber of 7 inches and a half, a five inch ball gave frequent flashes, upwards of 14 inches long, and sometimes a 6 inch ball would flash. I do not mention the long spark, because I was not provided with a favourable apparatus for the two larger cylinders. The 7 inch cylinder affords a spark of 10½ inches at best. The 9 inch cylinder, not having its conductor insulated on a support sufficiently high, afforded flashes to the table which was 14 inches distant. And the 12 inch cylinder, being mounted only as a model or trial for constructing a larger apparatus, is defective in several respects which I have not thought fit to alter. When the five inch ball gives flashes, the cylinder is enveloped on all sides with fire which rushes from the receiving part of the conductor. I never use points, but in a simple machine bring the conductor almost in contact with the cylinder. In this apparatus, that cushion to which the rubber is not applied serves that purpose.

(805.) "24. These marks exhibit the intensity as deduced from simple electrifying. I will now mention the rate of charging, which was nearly the same in all the three cylinders.

(806.) "A large jar of 350 square inches, or near 2 and a half square feet, with an uncoated varnished rim of more than four inches in height, was made to explode spontaneously over the rim. The jar, when broken, proved to be 0.082 inches thick on an average; and the number of square feet of the surface of the cylinder, which was rubbed to produce the charge of one foot, was, when least, 18.03, and when most, with good excitation, 19.34. The great machine at Haarlem charges a single jar of one foot square by the friction of 66.6 square feet, and charges its battery of 225 square feet at the rate of 94.8 square feet rubbed for each foot. The intensity of electricity on the surface of the glass is therefore considerably less than ¼th of that here spoken of; but if we take

the most favourable number 66.6 at the commencement of turning, and halve it on account of the unavoidable imperfection of a plate machine (as shown in par. 14.) it will be found, that the management applied to that machine would cause a cylinder to charge one square foot by the friction of 33½ square feet. It must be observed, however, that M. Van Marum's own machine, consisting of two plates 33 inches diameter, has only half the intensity, though he reckons it a very good one. This machine is about equal in absolute power to my 9 inch cylinder, with its short rubber; but it is near 30 times as dear in price. In all these deductions I omit the computations for the sake of brevity, and because they are easily made. The data are found in the description of the Teylerian machine, and its continuation published at Haarlem in the years 1785 and 1789.

(807.) "I shall here take the liberty of observing, that the action of the cylinder, by a simple cushion or the hand, which excited the astonishment of all Europe, in the memory of our contemporaries, was first improved by the addition of a leathern flap; then by moistening the rubber; afterwards by applying the amalgam; and, lastly, by the addition of a silk flap. Now I find by experiment, that we at present obtain upwards of 40 times the intensity which the bare hand produces; and consequently, that, since 18 times our present intensity will equal the utmost we can now command on strong glass, even in the form of a charge, we have a left step to take before we arrive at the amazing power than our immediate predecessors have already made. My 9 inch cylinder, when broken, proved to be one 21st of an inch thick.

(808.) "25. Some of the luminous appearances with balls in the positive state, have been slightly noticed as criterions of intensity. I shall now add, that the escape of negative electricity from a ball is attended with the appearance of straight sharp sparks with a hoarse or chirping noise. When the ball was less than two inches in diameter, it was usually covered with short flames of this kind, which were very numerous.

(809.) "26. When two equal balls were presented to each other, and one of them was rendered strongly positive, while the other remained in connection with the earth, the positive ball or ramified spark was seen to pass from the electrified ball: when the other ball was electrified negatively, and the ball, which before had been positive, was connected with the ground, the electricity (passing the same way according to Franklin) exhibited the negative flame, or dense, straight and more luminous spark, from the negative ball; and when the one ball was electrified plus and the other minus, the signs of both electricities appeared. If the interval was not too great, the long zig-zag spark of the plus ball struck the straight flame of the minus ball, usually at the distance of about ⅓d of the length of the latter from its point, rendering the other ⅔ds very bright. Sometimes, however, the positive spark struck the ball at a distance from the negative flame. These effects are represented in Plate CXXVII. fig. 1, 2, 3.

(810.) "27. Two conductors of three quarters of an inch diameter, with spherical ends of the same



Fig. 1.



Fig. 3.

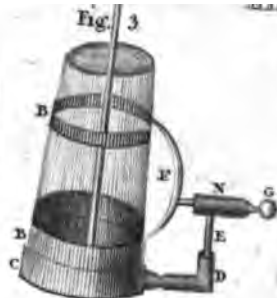


Fig. 2.



Fig. 13.



Fig. 14.

Fig. 8.



Fig. 10.



Fig. 11.



Fig. 9.



GALVANISM or ANIMAL ELECTRICITY

Fig. 18.



Fig. 16. *The Prepared Frog*



Fig. 17.



Fig. 14.

Fig. 12.



Electro Vegetometer

Fig. 5.

Fig. 4.

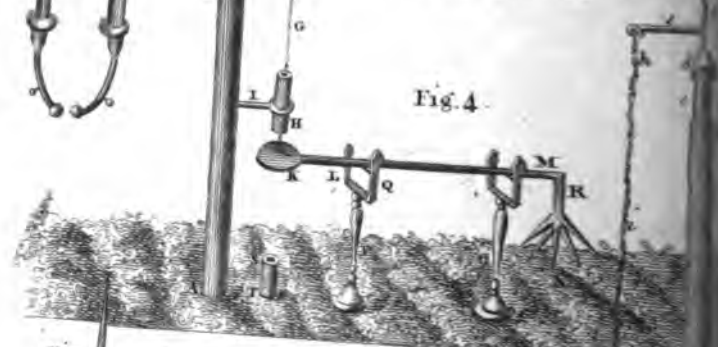


Fig. 7.

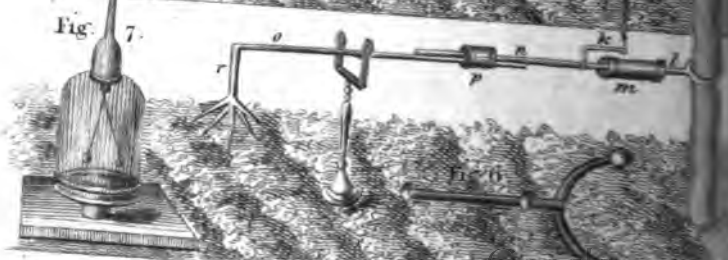


Fig. 6.

Fig. 19.



same diameter, were laid parallel to each other, at the distance of about two inches, in such a manner as that the ends pointed in opposite directions, and were six or eight inches asunder. These, which may be distinguished by the letters P and M, were successively electrified as the balls were in the last paragraph. When one conductor P was positive, *fig. 5.* it exhibited the spark of that electricity at its extremity, and struck the side of the other conductor M. When the last mentioned conductor M was electrified negatively, *fig. 4.* the former being in its turn connected with the earth, the sparks ceased to strike as before, and the extremity of the electrified conductor M exhibited negative signs, and struck the side of the other conductor. And when one conductor was electrified *plus* and the other *minus*, *fig. 6.* both signs appeared at the same time, and continual streams of electricity passed between the extremities of each conductor to the side of the other conductor opposed to it. In each of these three cases, the current of electricity, on the hypothesis of a single fluid, passed the same way.

(811.) "28. In drawing the long spark from a ball of four inches diameter, I found it of some consequence that the stem should not be too short, because the vicinity of the large prime conductor altered the disposition of the electricity to escape: therefore made a set of experiments, the result of which showed, that the disposition of balls to receive or emit electricity is greatest when they are remote from other surfaces in the same state; and that between the greatest disposition in any ball, whatever may be its diameter, every possible degree may be obtained by withdrawing the ball towards the broader or less convex surface out of which its stem projects, until at length the ball, being wholly depressed beneath that surface, loses the disposition entirely. From these experiments it follows, that a variety of balls is unnecessary in electricity; because any small ball, near the prime conductor, will be equivalent to a larger ball whose stem is longer.

(812.) "29. From comparing some experiments made by myself many years ago with the present, I considered a point as a ball of an indefinitely small diameter, and constructed an instrument consisting of a brass ball of six inches diameter, through the axis of which a stem, carrying a fine point, was screwed. When this stem is fixed in the prime conductor, if the ball be moved on its axis in either direction, it causes the fine point either to protrude through a small hole in its external surface, or to withdraw itself; because by this the ball runs along the stem. The disposition of the point to transmit electricity may thus be made equal to that of any ball whatever, from the minutest size to the diameter of six inches. *fig. 7. A.*

(813.) "30. The action of pointed bodies has been a subject of discussion ever since it was first discovered, and is not yet well explained. To those who ascribe this effect to the figure of electric atmospheres, and their disposition to fly off, may be answered, that they ought first to prove their existence, and then show how the cause which accumulated them does not prevent their escape; not to mention the difficulty of explain-

ing the nature of negative atmospheres. If these be supposed to consist of electrified air, it will not be easy to show why a current of air passing near a prime conductor does not destroy its effects. The opinion supported by the celebrated Volta and others, that a point is the coating to an infinitely small plate of air, does not appear better founded: for such a plate must be broken through at a greater distance only because higher charged; whence it would follow, that points should not act but at high intensities. I must likewise take notice, as a proof that the charge has little to do here, that if a ball be presented to the prime conductor, at the same time that a point proceeds from the opposite side of the ball, the electricity will pass by the point, though it is obliged to go round the ball for that purpose; but it can hardly be doubted, that whatever charge obtains in this case is on the surface of the ball next the conductor, and not on the remote side to which the electricity directs its course.

(814.) "31. The pointed apparatus described (par. 29.) shows that the effect of points depends on the remoteness of their extremities from the other parts of the conductor. This leads to the following general law: *In any electrified conductor, the transition or escape of electricity will be made chiefly from that part of the surface which is the most remote from the natural state.* Thus in the apparatus of the ball and stem, the point, having a communication with the rest of the whole conductor, constantly possesses the same intensity; but the influence of the surrounding surface of the ball diminishes its capacity. This diminution is less the farther the ball is withdrawn, and consequently the point will really possess more electricity, and be more disposed to give it out when it is prominent than when depressed. The same explanation serves for negative electricity.

(815.) "32. The effect of a positive surface appears to extend farther than that of a negative: for the point acts like a ball when considerably more prominent if it be positive than it will if negative.

(816.) "For the sake of conciseness, I pass over many facts which have presented themselves in the course of my experiments on the two electricities, and content myself with observing, that there is scarcely any experiment made with the positive power, which will not afford a result worthy of notice, if repeated with the negative."

(817.) As to the direction of the electric fluid, the following experiments have been thought to prove directly the passage of the fluid outward from the positive and inward to the negative side of the phial. *Fig. 1. Plate CXXXIV.* represents an electric jar, whose exterior coating is made up of small pieces of tin foil placed at a little distance from each other. It is to be charged in the usual manner, when small sparks of the electric fluid will pass from one piece of tin foil to the other, in various directions, forming a very pleasing spectacle. The separation of the tin foil is the cause of this visible passage of the fluid from the outside to the table, and the experiment is similar in appearance to that of the spiral tube mentioned in the foregoing section. If the jar be discharged by bringing a pointed wire gradually to the knob, K,

the unsealed part of the glass between the wire and knob will be agreeably illuminated with a crackling noise of the sparks. If the jar be suddenly discharged, the whole outside will be illuminated. The jar, in this experiment, must be very dry when used.

(818.) FIG. 2. Plate CXXXIV, represents two jars, or Leyden phials, placed one over the other, by which various experiments may be made to elucidate the common theory. Bring the outside coating of the bottle A in contact with the prime conductor, and turn the machine till the bottle is charged; then place one ball of the discharging rod upon the coating of B, and with the other touch the knob of the jar A, which will cause an explosion; now place one ball of the discharger on the knob A, and bring the other ball to its coating, and you have a 2d discharge. Again, apply one ball of the discharger to the coating of B, and carry the other to the coating of A, and it will produce a 3d discharge. A 4th is obtained by applying the discharger from the coating of A to its knob. The outer coating of the under jar communicating with the inside of the under one, conveys the fluid from the conductor to the large jar, which is therefore charged positively; the upper jar does not charge, because the inside cannot part with any of its electric fluid; but when a communication is formed from the outside of A to the inside of B, part of the fire on the inside of A will be conveyed to the negative coating of B, and the jar will be discharged. The second explosion is occasioned by the discharge of the jar A; but as the outside of this communicates, by conducting substances, with the positive inside of the jar B, if the ball of the discharging rod remains for a little time after the discharge on the knob of A, part of the fire of the inside of A will escape, and be replaced by an equal quantity on the outside from the jar B, by which means A is charged a second time; the discharge of this produces the 3d, and of B the 4th explosion.

(819.) FIG. 3. Plate CXXXIV, is an electric jar, which serves to illustrate the contrary states of the side of a Leyden phial while charging. BB is the tin foil coating; C a stand which supports the jar; D a socket of metal, carrying the glass rod E, a bent brass wire pointed at each end, and fixed at the end of the rod G; which rod is moveable in the spring tube N at pleasure: that tube being fixed by a socket on the top of the glass rod E, the jar is charged by the inside wire, which communicates with the different divisions of the inside coating by horizontal wires.

(820.) Place the jar to the conductor as usual; and, when charging, a luminous speck will appear upon the upper point of the wire at F, clearly showing, according to the commonly received opinion, that the point is then receiving the electric fluid. From the upper ring of coating B, on the outside of the jar, a fine stream or pencil of rays will at the same time fly off, beautifully diverging from the lower point of the wire F upon the bottom ring of the coating of the jar. When the appearances cease, which they do when the jar is charged, let a pointed wire be presented towards the conductor: this will soon discharge the jar silently; during which the point will be illu-

minated with a small spark, while the upper point of the wire will throw off a pencil of rays diverging towards the upper ring of the coating.

SECT. XXIII. EARTHER EXPERIMENTS on the PHENOMENA of CHARGED GLASS.

(821.) The preceding experiments of Mr NICHOLSON, seem to militate against Mr Tytler's doctrine quoted in PART II, that the direction of the electrical fluid is *outwards* from a body positively electrified, and *inwards* from one negatively so. Although we are still of opinion that Mr Tytler's theory is sufficiently ascertained, yet it is doubtless proper to give the reader a view of the experiments and arguments on both sides, that he may judge for himself. Mr MILNER, who has been at great pains to inquire into these matters, makes the following observations on charged glass.

(822.) "I. In the charged phial, when the inside has either kind of electricity communicated to it, the outside is found to possess a contrary power. It appears also from the preceding experiments, that either kind of electricity always produces the other on any conducting substance placed within the sphere of its influence. And as the same effect is also produced on electrics themselves, in the same situation, and as some portion of the air, supposing no other substance to be near enough, must be unavoidably exposed to such influence, it necessarily follows, that neither power can exist without the other; and therefore, in every possible case, positive and negative electricity are inseparably united.

(823.) "II. A phial cannot be fully charged, by which the outside acquires a contrary electricity, unless the external coating has a communication by some conductor with the earth. In the same manner, a full charge of the contrary electricity cannot readily be procured in these experiments without a similar communication.

(824.) "III. In both cases the interposition of an electric body between the contrary powers is absolutely necessary. In one case that body is glass, in the other it is air; and the experiment will not succeed in either, unless both the glass and the air be tolerably free from moisture.

(825.) "IV. It appears from the 18th experiment, that the influence of electricity acts in the same manner through glass as it does through the air, and produces a contrary power in both cases.

(826.) "V. A communication of the electric matter is more easily made through the fluid yielding substance of the air than through glass; which is so hard and solid a body, as to require a very considerable degree of power to separate its component particles: this, however, sometimes happens, and a hole is made through the glass itself, without design, in attempting to charge a very thin phial as high as possible, in the most favourable state of the atmosphere.

(827.) "VI. A conducting body receives the strongest charge of the contrary electricity, in these experiments, when it is brought as near as possible to the electric power, without being within the communicating distance. And it is well known that the thinnest phial, if it be strong enough to prevent a communication between the two surfaces, will always receive the highest charge.

(828.)

(818.) "VII. The electricity of the external surface of the charged phial cannot be destroyed, so long as the internal surface remains in force, and continues to exert its influence through the glass; because this influence was the cause of the contrary electricity on the external surface, and must therefore preserve it.

(819.) "VIII. If part of the course which the electric matter takes in discharging a phial be through the air, a small part of the charge will always remain; because the whole of the redundancy on one surface is not capable of forcing a passage through the resisting medium of the air, in order to supply the deficiency on the other surface. But if every part of the circuit, from the internal to the external coating, consists of the best conductors, and if the coated surfaces be nearly equal, and directly opposite to each other, the phial will then appear to have retained no part of the charge, so far as it is covered with tin foil; but the parts of it above the coating on both sides will, however, still retain the contrary electricities, after the circuit has been completed†. A residue of the charge may also be observed in every other instance of electrification, in which the degree of electricity is sufficient to force a communication between the electrified body and a conductor not insulated, through a small portion of the air: and if the experiment be carefully made, it will appear, that the whole of the redundancy is not capable of passing through the resisting intermediate air, in any case, and therefore a part of the charge must always remain. This may be conveniently shown by using a well coated electrophorus of about 5 inches diameter, the metal cover of which may be so strongly electrified, as to force a communication through the air, to any good conductor not insulated, at the distance of three quarters of an inch. After this, a second communication much weaker than the first may be made at the distance of about the twentieth part of an inch, which is the residue of the charge, or rather a part of it: for if the second communication be carefully made through the air, without touching the cover, it will be found still to have retained enough of the first charge to electrify a pair of vertical needles.

(820.) "As it appears from this view, that both these cases are similar in so many remarkable particulars, it follows, that they are essentially the same, notwithstanding they differ in the degree of power and some other circumstances, which may alter the form of an experiment without changing its nature. It is apprehended, therefore, that the above mentioned distinction will not only appear to be unnecessary, but also that either power cannot possibly exist without the other, as it has been shown under the first particular, that positive and negative electricity were inseparably united. But here it will be proper to examine more particularly the nature of charged glass.

(831.) "1. When a plate of coated glass has been charged, and the circuit between the coatings has been completed, by the mediation of a good conducting substance, no part of the coated surface is supposed to retain any part of the charge; but, according to the commonly received doctrine, the whole of it is said to be discharged; or in other words, to be brought into its natural state. This, however, is not really the case, as will evidently appear from the following experiment; the design of which is to show the effects produced by charging and discharging a plate of glass.

(832.) "2. Let the middle of a piece of crown window glass 7 inches square, be placed between two circular plates of brass, about the 16th part of an inch thick, and 5 inches in diameter. In order to enable these plates to retain a greater degree of power, it will be proper to terminate each of them with a round bead the third part of an inch thick; and the whole of the bead should be formed on one side of the plate, that the other side may remain quite flat, and apply well to the surface of the glass. Let the whole be insulated about four inches above the table, and in an horizontal position, by fastening one end of a cylindrical piece of some good insulating substance to the middle of the under plate, the other end of it being fixed in any convenient stand. Let a like insulating stem be fastened to the middle of the upper plate. Let a brass chain, which may easily be removed, reach from the under plate to the table. In the last place, bend a piece of brass wire into such a shape that it may stand perpendicularly on the upper plate; and let the upper extremity of this wire be formed into an hook, that it may be removed at any time by the assistance of a silk string, without destroying the insulation of the plate.

(833.) "3. The glass being thus coated with metal on both sides, and having also a proper communication with the table, will admit of being charged; and both coatings may be separated from the glass, and examined apart, without destroying the insulation of either: for the upper coating may be separated by the means of its own proper stem; and the under coating may be separated by taking hold of the corners of the glass, and lifting the glass itself. As glass readily attracts moisture from the atmosphere, it will therefore be necessary to warm it in the beginning, and to repeat it several times in the course of the experiment, unless the air should be very dry.

(834.) "4. Excite a smooth glass tube, of the common size, by rubbing it with silk, and apply it repeatedly to the bent wire until the glass be well charged. Then remove the chain, which reaches from the lower plate to the table, and also the charging wire from the upper plate, by laying hold of its hook with a silk string. It necessarily follows, from considering the quality of the power

N n 2 cr

† "The whole remainder of the charged phial must not, however, be ascribed to the cause above mentioned; for after taking away that part of it belonging to the coated surface, which could not force a passage through the air, if the phial be allowed to stand a short time on the table, the coated surface will again gradually acquire some power, which must be derived from the charge of the phial above the coating. Another source of the residuum will appear in the next experiment."

er employed in the present case, that the upper surface of the glass, together with the upper coating, must be electrified positively; and that the under surface and coating must be electrified negatively; but as it is designed in this experiment to examine the powers of charged glass, that no virtue may be imputed to the glass but what really belongs to it, let both coatings be separated from it; and after they have been brought to their natural state, by touching them with a conducting body not insulated, let the glass be replaced between them; and whatever effects may now be produced, must be ascribed solely to the powers of the charged glass. On bringing a finger near the upper coating, a small electrical spark will appear between that coating and the finger, attended with a snapping noise: Apply a finger in the same manner to the under coating, and the same thing will happen. This effect cannot be produced twice, by two succeeding applications to the same coating; but it may be repeated several hundred times over, in a favourable state of the atmosphere, by alternate applications to the two coatings; and the powers of the glass will be thus gradually weakened.

(835.) "5. This part of the experiment may be explained, by observing, that the contrary electricities have a natural tendency to produce, and to preserve each other, on the opposite sides of a plate of glass; and therefore, the increase or decrease of power, on either surface, must be regulated by the increase or decrease of the contrary power on the other side; and as in charging a plate of glass positively, no gradual addition of electric matter can be made to the upper surface, without a proper conveyance for a proportionable part to pass away from the lower surface; so in this method of uncharging it, the electric matter cannot be gradually taken away from the upper surface, without adding a proportionable part to the under surface: the one operation is the reverse of the other, and so are the effects; the one case being attended with an increase and the other with a decrease of power.

(836.) "6. Let the glass be again fully charged, and after bringing both coatings to their natural state as before, let the glass be replaced between them; and on touching the upper coating with a finger, and then separating it from the upper and positive surface of the glass by the insulating stem, this coating will acquire a weak negative power, which will be sufficient to produce a small spark while the glass is in full force, though after the power of the glass has been reduced, it will give little or no spark: but, in both cases, on touching the coatings alternately two or three times, the negative power of this coating, when separated from the positive surface of the glass, will be so considerably increased, as to produce strong negative sparks.—This effect may now be repeated several times, by only touching the upper coating, but the sparks will grow weaker every time;

and they may be restored again to nearly their former strength, by alternate applications to both coatings, as before. The same things will also happen to the under coating, in the same circumstances; but with this difference, that the power of the under coating, on being separated from the under and negative surface of the glass, will be positive. And thus a long succession of both positive and negative sparks may be produced in a favourable weather; or at any time by keeping the glass moderately warm.

(837.) "7. It appears from this part of the experiment, that each of the surfaces of the charged glass has a power of producing a contrary electricity in the coating in contact with it, by a momentary interruption of the insulation. It necessarily follows in producing these effects, that an electrical matter must have passed away from the upper coating, at the time of touching it, the same coating could receive from the upper surface of the glass; and therefore, the upper coating, by losing some of its natural quantity, will be negatively electrified: and also, that more electric matter must have been added to the under coating at the time of touching it, than the under surface of the glass could receive from it; and therefore the under coating, by receiving in addition to its natural quantity, will be positively electrified. It appears further, that the greater degree of this influential power, which may be consistent with the circumstances of the case, will be produced in either coating, by taking care the same time to bring the opposite coating to a like state of influential electricity: and that it is evident, that the influential powers of the two coatings have the same relation to each other as the contrary powers of the glass itself, and will therefore always increase or decrease together.

(838.) "8. The glass being again well charged as at first, let a brass wire bent in the form of a staple be brought into contact with the upper and lower coating at the same time. By this the common discharge will be made; but the equilibrium of the coated glass will be only restored in part, for a considerable degree of attraction will happen at the same time between the upper coating and the glass, which has frequently been strong enough to lift a piece of plate glass weighing 19 ounces. Neither coating will show the least external effect of electricity while it is in contact with the glass, but on separating either of them from it, if care be taken to preserve their insulations, the upper coating will be strongly electrified negatively, and the under coating will be strongly electrified positively. Let then both coatings be brought to their natural state, by touching them when separated from the glass, with a conducting body not insulated, and let the glass be replaced between them as before. In this state of things, on touching the upper coating only, and separating it from the glass, it will not be capable of giving any sparks; but on touching the coatings alternately five or six times

† "The whole of this effect must not be ascribed to the attraction of electricity. Perhaps the passage of electric matter between the coating and the glass may help to exclude the air; and then the attraction by cohesion, and the pressure of the external air both above and below, may be supposed to have the most considerable share in producing this effect."

times, it will then give a weak spark and this may now be repeated several times by only touching the upper coating : but on a second application of the bent wire to both coatings at the same time, a second discharge may be perceived, though much weaker than the first, and the coatings will be again brought into the same electrical state as immediately after the first discharge. This may frequently be repeated ; and a considerable number of strong negative sparks may be taken from the coating, when it is separated from the positive surface of the glass. If the glass in replacing it between the two plates be turned upside down, the electrical powers of both coatings will be changed by the next application of the discharging wire to complete the circuit ; and a succession of strong positive sparks may be taken from the coating when it is separated from the negative surface of the glass.

(839.) " 9. It appears from this part of the experiment, that the coated part of the charged glass is not brought into its natural state by completing the circuit between the coatings ; but that it still retained a degree of permanent electricity ; and the powers of both coatings were actually changed at the time of the first discharge ; and at a succession of the same powers may be produced in the coatings, without renewing the least application of electricity to the glass itself.

(840.) " 10. The whole quantity of electric matter added to the glass in charging it, is evidently distinguished into two parts in this experiment. The first part, which is by far the most considerable, appears to have been readily communicated from one surface of the glass to the other, along the bent wire, when it was first brought into contact with both coatings at the same time. The second part of the charge appears to be more permanent, and remains still united with the glass, notwithstanding the circuit has been completed. This permanent electricity, as well as the other, must be positive on the upper surface, and negative on the lower surface ; because, in the present experiment, the charge was given by a smooth glass tube excited with a silk rubber. Now, the influence of the opposite and permanent powers on the different sides of the glass (each side having a tendency to bring the coating in contact with it to a state of electricity contrary to its own) must keep each other, in causing part of the electric matter naturally belonging to the upper coating to pass away from it to the under coating, along the discharging wire, and at the same time the charge to pass the same way. The upper coating, therefore, by losing some part of its natural quantity, must be negatively electrified ; and the under coating, by receiving an addition to its natural quantity, must be positively electrified. The whole quantity of electric matter, which the influence of the permanent electricity of the glass is capable of taking from one coating and of adding to the other, bears but a small proportion to the whole charge : and therefore the second and every

subsequent discharge must be considerably weaker than the first.

(841.) " 11. It appears from several of the preceding experiments, that a considerable degree of influential power may be produced at some distance by an electric in full force ; and therefore a small excited body of a cylindrical shape was sufficient to answer that purpose : but when the excited electric has been so far weakened that it cannot communicate its own power, nor produce this influential power in any body, unless it be brought very near or in contact with it, bodies of a cylindrical form must then act to great disadvantage, and a small degree of power only can be produced ; because the strength of the influential electricity in this case will be in proportion to the surfaces of the electric and conducting bodies, which are brought near together, or in contact with each other ; and therefore a plate of glass in the same circumstances, whether its permanent power be derived from excitation or communication, is enabled from its shape to produce a considerable degree of the influential powers in the coatings in contact with it.

(842.) " 12. It appears from this experiment, that the ingenious professor VOLTA's electrophorus is, in reality, a resinous plate charged with permanent electricity by friction ; and because there is a less disposition in a body of this kind, to attract moisture from the atmosphere than there is in glass, it will retain the power better, and consequently be the longer capable of producing a contrary electricity in the insulated metal cover. If it should be thought necessary to support this observation by a direct experiment, it may easily be done by making a thin flat plate of any resinous electric substance, and larger than the insulated cover, but without fastening a coating to either surface ; and then, whether this plate be charged by excitation or communication, one of its sides will be positive and the other side negative ; and a succession of positive sparks may be produced on the negative side, and of negative sparks on the positive side, by a proper application of the insulated metal cover. It will be also found, that this resinous plate cannot be well charged, either by excitation or communication, unless a coating of some conducting matter should be kept in contact with the under surface ; and it should also have some communication with the floor.

(843.) " 13. It has been very properly recommended to use a particular kind of rubber, and to attend to the state of it, in order to excite glass well ; but it will not be necessary to pay the least regard to these circumstances in the following experiments, in which a method will be shown of charging a small phial and a plate of glass at the same time, by a gradual accumulation of power ; that power being entirely derived from the glass itself, and with no other degree or kind of friction than is necessarily connected with the form of the experiment.

(844.) " 14. Place a circle of tin foil five inches

" † Some new terms seem to be wanted in order to express with precision the different parts of the charge. And if that part of it, which cannot be destroyed by completing the circuit, should be called the permanent part of the charge, or more simply the charge ; then might the other part, or that which may be destroyed by completing the circuit, be named the surcharge.

in diameter on the table, between a soft piece of baize and the middle of the same plate of glass that was used in the last experiment, which will thus be coated on the under side; and in order to preserve a proper communication with this coating, let a fillet of tin foil reach from it beyond the extremity of the glass. The same insulated metal cover is to be used for the upper coating as before. Let a thin ounce phial of glass be filled with brass filings, and coated with tin foil on the outside to about one inch from the top. Let a large brass wire, the fifth part of an inch in diameter, pass through the cock of the phial into the filings, about an inch of it being left above the cork, and let the upper extremity of this wire be well rounded. This experiment requires, that the whole construction should be well warmed at first; and it will be necessary to repeat it at proper intervals, unless the atmosphere should be very dry.

(845.) "15. Taking hold of the wire of the phial with one hand, let it be placed on the upper surface of the glass, and its bottom carried in contact over the middle of the upper surface, as far as the tin foil coating reaches on the under side; and during this part of the operation, a finger of the other hand must be kept in contact with the fillet of tin foil. Then lifting the phial by the wire with one hand, let it be placed on the insulated metal cover, suspended in the air with the other hand; and after shifting the hand from the wire to the coating, let the bottom of the phial be placed on the end of the tin-foil fillet. Place the insulated metal cover on the middle of the glass, and touch it with a finger of one hand, while the other hand touches the tin foil fillet. Now lift the insulated cover by its stem, and bring the head of the cover in contact with the wire of the phial, and a very small spark of light will appear between them. Let this be repeated in the same manner about 15 times, taking care to preserve a proper communication between the coating and the floor. Then taking hold of the phial by the coating, let it be replaced on the insulated cover while it is suspended in the air; and after shifting the hand from the coating to the wire, let it be again placed on the middle of the glass, and let the bottom be again carried in contact over the middle of the glass, holding the wire in one hand, while the other has a proper communication with the tin foil coating. Let the phial be again returned to the tin foil fillet as before, and let the insulated cover be applied repeatedly to the wire, immediately after every separation from the glass; and a brighter spark, together with a weak snapping, will now attend each application, if it be carefully observed to touch the cover with one hand before every separation, while the other hand rests on the fillet of tin foil. By proceeding in this manner, after the third application of the phial to the glass, a very weak shock will be felt in those fingers which are used in completing the circuit of the glass; and after repeating two rounds more in the manner before mentioned, the phial will be fully charged. By applying the coating of the phial when it is in full force to the upper surface as before, the glass plate will get the greatest power it is thus capable of receiving, and will then give a shock

as high as the elbows. After this, on attempting to lift the insulated cover, the glass itself will generally be lifted at the same time, with the tin-foil coating adhering to the under surface; but by continuing the separations of the cover from the glass, a succession of the strong negative sparks may be produced by the influence of the upper surface; and by turning the glass over, and leaving the tin foil coating on the baize, a succession of strong positive sparks may be produced by the influence of the other side.

(846.) "16. This experiment may be performed more steadily by placing the glass, together with the tin foil coating and baize, on a plate of metal about one sixth of an inch thick, and of the same square as the glass. The whole may be fastened together by two small holdfasts placed at the opposite corners, which will prevent the glass from being lifted. This plate of metal will be useful in another view; for after it has been sufficiently warmed, by retaining heat well, it will help to keep the glass dry, and consequently fit for use much the longer. But when it shall be required to show the contrary powers of the opposite sides of the glass, it will be more convenient not to fasten the parts together, and the whole may be kept sufficiently steady, by the operator's keeping down one corner of the glass with a finger, and by placing a proper weight on the opposite corner.

(847.) "17. The bottom of the phial cannot be carried in contact over the glass without producing some little degree of friction; from which power in this experiment is originally derived. The cover will appear on examination to be electrified negatively after every separation from the glass: but as it was touched in completing the circuit between the coatings before every separation, it necessarily follows, that the cover will have only an influential electricity, and consequently that the permanent power of the upper surface of the glass must be positive. The negative power of the cover is communicated to the wire of the phial, by which the inside is electrified negatively and the outside positively; both these powers will increase with every application, because the circumstances of the phial are favourable to its charging. The phial must be insulated every time it is required to shift the hand from the wire to the coating, or from the coating to the wire; for without this precaution the phial would be discharged. By applying the outside of the phial to the upper surface of the glass, in the manner above mentioned, the phial will be partly discharged on that surface: although it must be therefore weakened, the power of the glass will be increased, and consequently enabled to produce a proportionably stronger effect on the brass cover, which by the next round of applications will give the phial a stronger charge than it had before. And thus a very small degree of original power is first generated, and then employed in forming two different accumulations; and by making each of these subservient to the increase of the other, the phial is at last fully charged, and the glass plate acquires such a degree of the surcharge, as to give a pretty smart shock; and after that, it remains capable, by the influence

ence of its permanent powers, of producing a succession of positive and negative sparks on the opposite surfaces.

(848.) "18. The contrary charge may be given to the phial by taking hold of the coating, and carrying the wire in contact over the middle of the upper surface of the glass, and by applying the power of the insulated cover to the coating; and if the operation be conducted in every other respect in the same manner as before, then will the inside be electrified positively, and the outside negatively. The powers of the glass plate will be the same as they were in the former case.

(849.) "19. After the phial has been fully charged negatively, by the process of the last experiment, let it be insulated; and taking hold of the wire, let the bottom be held uppermost, and let the hand which holds it rest on the fillet of tin. Apply the insulated cover to the glass, and touching it with a finger of the other hand, separate it from the glass; and on bringing it towards the coating of the phial, a strong spark will be between them. After repeating this between 20 and 30 times, the powers of the phial will be destroyed; and by continuing the same operation, it will be inverted; for the inside will be at last charged positively, and the outside negatively.

(850.) "20. The same effect may be produced, carrying the glass over, and by repeatedly applying the influential electricity, produced on that to the wire of the phial.

(851.) "21. When the phial has been fully charged negatively, as in the last experiment, take hold of the coating of the phial with one hand, while the other hand rests on the tin foil fillet, carrying the wire to the middle of the upper surface of the glass, as far as the tin foil coating extends to the other side. By this the powers of the glass will be changed.

(852.) "22. Another, and perhaps a better method of applying the phial, is to place the insulated cover on the surface of the glass, and then holding the phial by the coating in one hand, to carry the wire to the cover, while the other hand carries the fillet of tin foil; by which a shock will be given, and the same change of powers will be produced in an instant, which before took up a little time. On lifting the insulated cover from them immediately after the shock, it will be positive, or have the same power as the inside of the phial; and on replacing the cover, and completing the circuit of the glass plate, the surcharge will be destroyed; another shock will be felt; and the power of the cover, after the next separation, will be positive, or contrary to that of the inside of the phial. Apply this positive power to the inside of the phial as before; and after 15 applications, the powers of the phial will be destroyed: and by still proceeding in the same manner, the powers of the phial will be changed, and the inside will be fully charged positively and the outside negatively, by 60 applications.

(853.) "23. These effects may also be produced by a single application of the coating of the phial to the other side of the glass plate; and by repeated applications of the influential electricity, produced on the same side, to the coating of the phial.

(854.) "24. If it were simply the object in this

experiment to change the powers of the phial, the operation might then be considerably shortened, by completing the circuit of the phial, and consequently destroying the whole surcharge: but it was intended to show what effects might be produced, by opposing the contrary powers to each other; and by doing this it appears that either side of the glass plate can destroy the powers of the phial, and give it a contrary charge; that either side of the phial can also change the powers of the glass plate; and that the powers of the glass plate, thus inverted, can again destroy the powers of the phial, and give it a full charge of the contrary electricity.

(855.) "25. Here it may be observed, that, in some cases, the quality of the power may be determined by observation alone. When the phial employed in the two last experiments has been fully charged, it may be known whether the inside be positive or negative from the light which appears at the wire, or from the hissing noise which attends it: for when the phial has been fully charged positively, if the room be sufficiently darkened, a bright luminous appearance may be seen, diverging in separate rays to the distance of an inch, attended with an interrupted hissing noise; and both the light and the noise continue a very short time. But when the phial is fully charged negatively, a weaker and more uniform light appears, which does not extend itself more than the sixth part of an inch, and is attended with a closer and more uniform hissing; and this noise and light always continue longer than the former. Even positive and negative sparks, passing between the insulated cover and a finger, may be distinguished from each other: for the positive sparks are more divided, give less light, make a weaker snapping noise, and affect the finger less sensibly than the negative.

(856.) "26. The strongest sparks which can be produced in these experiments, are those that pass between the coating of the phial and the insulated cover, when they possess contrary powers; but they will be more particularly vigorous, if the coating be positive and the insulated cover negative."

SECT. XXIV. EXPERIMENTS on the PASSAGE of the ELECTRIC FLUID, OVER and THROUGH DIFFERENT SUBSTANCES.

(857.) "Many very curious experiments have been made by Dr PRIESTLEY; concerning the discharging of electric shocks over the surface of different bodies: He found, that a battery may thus be made to discharge itself at a much greater distance than it would do if sent directly through the air. The experiments were begun with ice; and he first accidentally discovered, that, when the shock of a common jar was discharged on a plate of ice, it would sometimes run over the surface and strike the chain directly on the other side. With a single jar, however, the distance was not much greater than what it would have passed over in the usual way; but, with a battery, it exceeded the usual distance in a very great degree.

(858.) Endeavouring to make a circular spot, such as he had formerly made on metals, upon a piece of raw flesh, the doctor took a leg of mut-

ton,

ton, and laying the chain that communicated with the outside of the battery over the shank; he took the explosion on the outward membrane, about 7 inches from the chain; but was greatly surprised to observe the electric fire not to enter the flesh, but to pass in a body along the surface of it to come to the chain. Thinking that this might be occasioned by the fatty membrane on which the explosion was made, he again laid the chain in the same manner over the shank, and took the explosion upon the muscular fibres where they had been cut off from the rest of the body; but still the fire avoided entering the flesh, made a circuit of near an inch round the edge of the joint, and passed along the surface to come to the chain as before, though the distance was near 12 inches. Imagining that this effect was promoted by the chain lying lightly on the surface of the flesh, and therefore not actually in contact with it, he took another explosion upon the hook of the chain, which was thrust into the flesh. On this the fire entered the mutton; and as he held it in his hands, both his arms were violently shocked up to his shoulders.

(859.) Dr PRIESTLEY next determined to try the effect of different conducting substances, in the same manner; and of these water was the most obvious. "Next day, (says he) I laid a brass rod communicating with the outside of the battery, very near the surface of a quantity of water, (to resemble the chain lying upon the surface of the flesh, without being in contact with it,) and, by means of another rod furnished with knobs, made a discharge on the surface of the water, at the distance of several inches from any part of the rod; when the electric fire struck down to the water, and, without entering it, passed visibly over its surface till it arrived at that part of the rod which was nearest the water, and the explosion was exceedingly loud. If the distance at which I made the discharge exceeded 7 or 8 inches, the electric fire entered the water, making a beautiful star upon its surface, and yielding a very dull sound. When I first made this experiment of the electric flash passing over the surface of water, I thought it necessary, that neither the piece of metal communicating with the outside, nor that communicating with the inside, of the jars, should touch the water immediately before the discharge. But I afterwards found, that the experiment would answer, though either, or even both of them, were dipped in the water: for, in this case, the explosion would still prefer the surface to the water itself, if the distance was not very great; and would even pass to a greater distance along the surface, when there was a nearer passage from one rod to the other in the water."

(860.) The doctor afterwards tried to pass electric flash over the surfaces of a great many of different bodies, but found it impossible of many of them. He therefore imagined a property of conducting a shock was peculiar to water and raw flesh; however, that the flash passed on a touch stone, and likewise the best kind of iron ore, except of its sides. The piece was three inches in it

full charge of a jar of three square feet would not enter it. The explosion passed over the surface of oil of vitriol, with a dull sound and red colour; but in all other cases, if it passed at all, it was in a bright flame, and with a report peculiarly loud. It passed over the surface of the most highly rectified spirit of wine without firing it; but when to great a distance was taken, the electric fire entered the spirit, and the whole was in a blaze in moment. This was always the case when such substances were employed as are but indifferent conductors of electricity; as raw flesh, water, &c.

(861.) But when good conductors were used, such as charcoal of different kinds, no remarkable appearances were produced. So far was the shock from passing visibly over the surface of any metal, that, if the distance through the air, in order to a passage through the metal, was ever so little nearer than the distance between the two surfaces, it never failed to enter the metal; so that its entering the substance of the metal, and its coming out again, seemed to be made without obstruction. If as much water was laid on a small piece of brass as could lie upon it, it would not go over the surface of the water, but always fire through the water into the metal. But if the metal lay at any considerable depth under the water, it would prefer the surface. It even passed over 3 or 4 inches of the surface of water as it boiled in a brass pot, amidst the steam and bubbles which seemed to be no hindrance to it.

(862.) Animal fluids of all kinds, seemed peculiarly to favour this passage of the electric matter over their surface; and the report of these explosions was manifestly louder than when water was used. In all cases of this kind, the report was considerably louder than when the discharge was made in the common way. The explosions were observed by persons out of the house, and a neighbouring house, very much to resemble smart cracking of a whip. "But (says Dr Priestley) the sound made by these explosions, though by far the loudest that ever I heard of the electric flash, much short of the report made by a single spark of no very great size, of Mr RACKSTRAW's experiment, says, that it was as loud as that of a pistol." He also observes, that when the electrical explosion does not pass over the surface of the water, but enters it, a regular star is made upon the surface, consisting of 10 or 12 rays; and what is remarkable, those rays which stretch towards the brass rod that communicates with the outside of the battery are always longer than the rest. In the explosion is made at such a distance as to be near taking the surface, those rays will be 3 or 4 times longer than the rest, and a line between the whole appearance.

(864.) "June 13, 1766, (says he,) after having discharged a battery of about 40 square feet with a smooth brass knob, I accidentally observed upon it a pretty large circular spot, the centre of which seemed to be superficially melted, in a great number of dots; larger near the centre, and smaller at a distance from it. Beyond this spot was a circle of black dust which was easily wiped off: but what I was most struck with was, that after an interruption of melted places, there was an entire and exact circle of shining dots, consisting of places superficially melted like those at the centre. The appearance of the whole, exclusive of the black dust, is represented *Plate CXXV, fig. 2.*

(865.) "June 14th, I took the spot upon smooth pieces of lead and silver. It was in both cases like that on the brass knob; only the central spot on the silver consisted of dots disposed with the utmost regularity, like radii from the centre of a circle, each of which terminated a little short of the external circle. I took the circular spot upon polished pieces of several metals with the charge of the battery, and observed that the cavities in some of them were deeper than in others; as I brought in the following order, beginning with the deepest, tin, lead, brass, gold, steel, iron, copper, silver. I will not be positive as to the order of some of the metals; but silver was evidently affected a fourth part so much as gold, and much less than any of the others. The circles were marked as plain, but the impression was superficial.

(866.) "I also made the explosion between a piece of lead just solid after melting, and another such piece that I had kept a considerable time. The piece of fresh lead was melted more than the other, but there was no other difference between them. The semi-metals, as bismuth and zinc, received the same impression as the proper metals; they melted nearly as much as iron. I made the discharges between a piece of highly polished steel and a piece of very smooth iron, and in all I thought the steel was more deeply melted than the iron.

(867.) "Presently after I had observed the single spot, I imagined, that, whatever was the cause of its appearance, it was not improbable but that several concentric circles might be procured, if a great quantity of coated glass was used, or

if the explosion was received upon metals which melted more easily fused than brass. Accordingly, on June 17, taking the moderate charge of a battery consisting of about 38 square feet upon a piece of glass, I first observed a second outer circle, at a distance from the first, as the first was the central spot. It consisted of a circle of small, equally visible, extremely fine dots; but I did not see the light; but I saw the dots.

from the innermost. All the space within the first circle was melted; but the space was very well defined, and by no means like a centre, which in this case was quite obliterated. The appearance of these three concentric circles is represented *Plate CXXV, fig. 4.* The distance from the first to the second was made afterwards by measuring in the diameter of the first circular spot, and putting a drop of water upon the surface, communicating with the inside of the battery, the discharge at the distance of one inch from the spot was just the same as if it had been at the distance of half an inch. The diameter of an inch in diameter. I received an electric shock over the forehead when I melted lead, I found that it was not so, though neither of the spots was so deep. The charge was made touching the battery, the impression was made on the surface of quicksilver and the lead of the battery, the circular spot; and remained in the same state of fusion as when it was first made.

SECT. XXV. EXPERIMENTAL TRICITY OF BOTH SIDES OF A PIECE OF GLASS TO BE ALIKE, WHILE CHARGED.

(869.) Several experiments were made above related tend to show that the charge of a phial was positive or negative, but the results were not consistent in the same manner.

(870.) Mr. L. observed that when he charged a glass phial with his own body, it was his own body which he charged. His experiments dated the same day, and are the same.

(871.) Several experiments were made to show that the charge of a phial was positive or negative, but the results were not consistent in the same manner.

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be), there in the at- regions) a fluid. On ys felt with abundance if you erect in order

wire, and make a communication from the prime conductor to the ball on the wire in the bottle: on working the machine, the sharpened end of the wire will permit the bottle to be charged although it be insulated; and if the wire be very finely pointed, the bottle may be charged nearly as well as if it were not insulated: I say, on working the machine, the phial will charge, and the cork balls will immediately repel each other; but whilst this phial is charging, take the first phial, which having been previously charged at the same prime conductor in the hand, and while the 2d phial is charging, present the ball of the first to the cork balls, and they will all repel each other. This plainly proves that the outside of the 2d bottle is electrified plus at the time that it is charging, the same as the inside of the first; and the inside of both the bottles will readily be allowed to be charged alike, that is, plus or positive.

(872.) "II. Let the 2d bottle in the last experiment be wholly discharged, and charge it again as before, (the first bottle yet remaining charged,) and whilst it is charging, let the ball of the first approach the cork balls contiguous with the 2d, and they will, as before, all repel each other: withdraw the ball of the first, and so long as the machine continues to charge the 2d bottle higher, the cork balls will continue to repel each other; but cease working the machine, and the cork balls will cease to repel each other till they touch, and will then very soon repel each other again; then let the ball in the first phial approach the cork balls, and they will now be attracted by it, instead of being repelled as above, as in the last experiment. This also plainly shows, that both sides of a Leyden phial are alike at the time that it is charging; and at the same time evidently shows, that the difference of the two sides does not take place till after the bottle is charged, or till the machine ceases to charge it higher.

(873.) "III. In this experiment, let the former bottles be discharged, then let one of them be placed upon the insulating stand. Let a ball be put on over the sharpened end of the 3d wire, and let it be laid on the stand as before, so as to touch the coating of the phial: place the other phial on the table, so that its ball or wire may touch the ball on the 3d wire, or any part of the wire itself: make a communication from the ball on the wire of the first phial to the prime conductor: then, by working the machine, both bottles will soon become charged. As soon as they are pretty well charged, and before the machine ceases, remove the 2d phial from the 3d wire; after the 2d phial is removed, cease working the machine as soon as possible: take the 3d wire, with its two balls, off the stand with the hand, and lay it on the table, so that one of its balls may touch the outside coating of the 2d phial: remove the first phial off the stand, and place it on the table so as to touch the ball at the other end of the 3d wire; then, with an insulated discharging rod, make a communication from the ball in one bottle to the ball in the other: if the outside of the first phial be negative at the time it is charging, the inside of the 2d will be the same, and making the above communication would produce an explosion, and both bottles would be discharged; but the contra-

ry will happen, for there will be no explosion, nor will either of the bottles be discharged, although there be a complete communication between their outsidess, because the inside of them will be positive. This is a proof, that considering one side of a phial to be positive and the other negative at the time they are charging, is a mistake: as well as that, if any number of bottles be suspended at the tail of each other, all the intermediate surfaces or sides do not continue so.

(874.) "IV. Here also let the apparatus be disposed as in the last experiment, till the bottles are highly charged: then, with a clean stick of glass, or the like, remove the communication between the ball of the first phial and the prime conductor before the machine ceases working; then, with an insulated discharging rod, make a communication from the outside to the inside of the first phial; a strong explosion will take place on account of the excess within-side, notwithstanding they are both positive.

(875.) "V. This experiment being something of a continuation of the preceding one, immediately after the last explosion takes place, discharge the prime conductor of its electricity and atmosphere: then touch the ball in the first phial with the hand, or any conducting substance that is not insulated: then will the inside coating of the first phial, which at first was so strongly positive, be in the same state as the outside coating of the 2d, having communication by the hand, the floor, &c. with each other; that is, negative, if any thing is properly be called negative or positive that has communication with the common stock: both pair of cork balls that are electrified either plus minus, will no more be attracted by either the inside coating of the first phial or the outside coating of the second, than they will be by the table, which they stand, or a common chair in the room while they continue in that situation. Remove the aforesaid communication from the ball of the first phial; touch the ball in the second, as before in the first, or discharge the bottle with the discharging rod, and the ball in the first bottle will immediately become negative: with a pair of cork balls, electrified negatively, approach the ball in the first phial, and they will all repel each other, or, if the cork balls be electrified positively, they will be attracted.

(876.) "All these circumstances together fully to prove what has already been said, not only that the inside of the first phial, which was strongly positive, may be altered so as to become in the same state as the outside of the second without discharging the phial, or any more working the machine; but that it may be fairly changed, from being positively charged to being negatively charged. If a pair of cork balls are now changed on to the ball of the wire in this phial, with the help of a stick of glass, they will repel each other, being negatively electrified. Make a communication from the outside of the bottle to the table, and replace the communication from the prime conductor to the ball in the bottle; then upon moderately working the machine to charge the bottle, the cork balls will cease to repel each other till they touch, and will soon repel each other again by being electrified positively. Here

the working the machine anew plainly shows that the inside of the first bottle, which was positive, was likewise changed to negative."

SECT. XXVI. *Of the PRESERVATION of ELECTRICAL JARS.*

(877.) In all experiments made with electrical jars and batteries, the phials are in danger of being broken by the force of the discharge. Mr BACON gives the following account of his discovery of a method of preserving jars from such accidents.

(878.) "In making electrical experiments, and in particular those in which the Leyden phial is concerned (a number of which together compose most electrical batteries), a method to preserve the bottles or jars from being struck through by the electric charge is very desirable; but I do not know that it has hitherto been accomplished. The numbers of them that have been destroyed in many experiments, have led me to various conjectures to preserve them: at the same time I have been obliged to make use of bottles instead of open mouthed jars. And as coating the former within side is very troublesome, it has put me on thinking of some method more easy, quicker, and equally firm and good, as with the tin foil.

(879.) "With respect to the new method of coating, I failed; though something else presented itself rather in behalf of the former: therefore introducing the process here will not be of very great use: unless in saving another the trouble of making use of the same method, or giving a hint towards the former, so as to succeed with certainty. My aim was, to find something that should be quick and clean, and not easy to come off with the rubbing of wires against it, and yet a good conductor. My first essay was with a cement of pitch, rosin, and wax, melted together; into which, to make it a good conductor, I put a large proportion of finely sifted brass filings. When this mixture was cold, I put broken pieces into the bottle, and warmed the bottle till it was hot enough to melt the cement in it so as to run, and cover the bottle within side; then I coated the outside with tin foil as is commonly done, and now it was fit for use, or ready to be charged; to which I next proceeded; and I believe I had not made more than 4 or 5 turns of the winch before it spontaneously struck through the glass with a very small charge.

(880.) "I then took off the outside coating, and stopping the fracture with some of my common cement, after which I put the coating on again; and, in a little time as before, it was struck through again in a different place; and thus I did with this bottle 5 or 6 times; sometimes it struck through the cement, but it struck through the glass in four different places. This made me consider what it might be that facilitated the spontaneous striking through the glass, and likewise what might retard it. I had long before thought that jars or bottles appeared to be struck through with a much less charge, just after their being coated, or before they were dry, than when they had been coated long enough for the moisture to be evaporated from the paste with which I mostly lay on the tin foil; and could only consider the dry paste as a

kind of mediator between the tin foil and the glass, or, in other words, that the moisture of the paste was a better conductor, and more in actual contact with the glass, than the paste itself when dry. And the coating the bottles with the heated cement, though long afterward, did not alter my former idea; for it appeared as if the hot cement, with the conducting substance in it, might be still more in actual contact with the glass than the moisture in the paste.

(881.) "On these probabilities I had to consider what might act as a kind of a mediator more effectually than the dry paste between the glass and the tin foil. It occurred, that common writing paper, as being neither a good conductor nor insulator, might be serviceable by being first pasted smoothly to the tin foil and left to dry. The paper then being pasted on one side, having the tin foil on the other, I put them on the glass together with the tin foil outward, and rubbed them down smooth. This succeeded so well that I have never since had any struck through that were thus done, either common phials, or large bottles which contain near three gallons each, though some of the latter have stood in the battery in common use with the other a long time. And as I have never had one struck through that has been prepared in this way, I am much less able at present to tell how great a charge they will bear before they are struck through, or whether they will be struck through at all."

SECT. XXVII. *Of the ELECTRO-VEGETOMETER, and the EFFECTS of ELECTRICITY on VEGETATION.*

(882.) It was an idea entertained by electricians, many years ago, that electricity is a principal cause of vegetation; but, though it was pretty generally agreed that the electric fluid is favourable to the growth of plants, no attempt was made to apply this idea to any practical purpose till of late.

(883.) Such researches seem indeed to have been laid aside from an opinion very naturally entertained, that it was by no means probable, that the fluid could be collected artificially in sufficient quantity to be of any use. But in a late treatise on this subject, the Abbe BERNOLINI not only shows a method of collecting the electric fluid from the atmosphere, so as to be useful in ordinary practice, but endeavours to cure by its means some of those diseases to which plants are liable from insects, and on which the ordinary remedies have no effect.

(884.) "In the first place (says the Abbe), there is continually and every where diffused in the atmosphere (particularly in the upper regions) a considerable quantity of the electric fluid. On the mountains especially, it is always felt with most energy, and shows itself in greater abundance than on the plains. On the former, if you erect conductors, or launch electric paper kites, in order to seek out and direct this fluid towards the surface of the earth, where several causes sometimes prevent its appearance; you will find it very soon subjected to your power, descend, as if at your command, from heaven itself, and creep at your feet to execute your orders. These are facts extremely well ascertained; but if one doubts of

them, he has nothing to do but to erect a similar apparatus or set off electric kites to be convinced of the truth." See SECT. XI. PART III.

(885.) "This principle being granted: in order to remedy the deficiency of the electric fluid which has already been proved to be hurtful to vegetation, we must erect in the spot which we want to fecundate, the following new apparatus, which has had all possible success, and which I shall call by the name of the **ELECTRO-VEGETOMETER**. This machine is as simple in its construction as efficacious in its manner of acting; and I doubt not but it will be adopted by all those who are sufficiently instructed in the great principles of nature.

¶ (886.) "This apparatus is composed of a mast **AB**, (*Plate CXXXIV, fig. 4.*), or a long pole thrust just so far into the earth, as to stand firm and be able to resist the winds. That part of the mast which is to be in the earth must be well dried at the fire; and you must take care to lay on it a good coat of pitch and tar, after taking it from the fire, that the resinous particles may enter more deeply into the pores of the wood, which will then be dilated, at the same time that its humidity will be expelled by the heat. Care must likewise be taken to throw around that part fixed in the earth a certain quantity of coal dust, or rather a thick layer of good cement, and to build besides a base of mason-work of a thickness and depth proportionable to the elevation of the instrument, so as to keep it durable and solid. As to the portion of it above the ground, it will be sufficient to put upon it some coats of oil paint, except one chooses rather to lay on a coat of bitumen the whole length of the piece.

(887.) "At the top of the mast there is to be put an iron console or support **C**; whose pointed extremity you are to fix in the upper end of the mast, while the other extremity is to terminate in a ring, in order to receive the hollow glass tube which is seen at **D**, and in which there is to be glued an iron rod rising with the point **E**. This rod, thus pointed at its upper extremity, is completely insulated, by reason of its keeping a strong hold of a thick glass tube, which is filled with a quantity of bituminous matter, mixed with charcoal, brick dust, and glass powder; all together forming a sufficiently good and strong cement for the object in view.

(888.) "To prevent rain wetting the glass tube, care must be taken to solder to the rod **E** a funnel of white iron; which consequently is entirely insulated. From the lower extremity of the rod **E** hangs a chain **G**, which enters into a second glass tube **H**, supported by the prop **I**. The lower end of the above mentioned chain rests upon a circular piece of iron wire, which forms a part of the horizontal conductor **KLMN**. In **L** is a breaker with a turning joint or hinge, in order to move to the right or left the iron rod **LMN**; there is likewise another in **Q**, to give still greater effect to the circular movement. **O** and **P** are two supports terminating in a fork, where there is fixed a silken cord tightly stretched, in order to insulate the horizontal conductor: in **N** are several very sharp iron points.

(889.) "In *fig. 5.* you see an apparatus in the

main like the former, but with some difference in the construction. At the upper extremity of the mast **ab**, there is bored a hole, into which enters a wooden cylinder **c**, which has been carefully dried before a great fire, in order to extract its humidity, dilate its pores, and saturate it with tar, pitch, or turpentine, applied at repeated intervals. The more heat the wood and bituminous matter receives, the more the substance penetrates, and the insulation will be the more complete. It is moreover proper to besmear the circumference of the little cylinder with a pretty thick coat of bitumen. This preparation being made, we next insert the cylinder **c** into the hole **b** of the mast; and it is easy to join together these two wooden pieces in the most perfect manner.

(890.) "At the upper extremity of the cylinder **c** we strongly attach an iron rod **gfr** which, instead of one, is terminated by several sharp points, all of gilded iron. In *c* you see a branch of iron resembling the arm of an iron crow, from whence hangs an iron chain **h**, at the end of which there is hooked a piece of iron resembling a mason's square, and ending in a fork. The piece of iron **i** is a ring with a handle entering a little into the glass tube **m** filled with mastich, in the same manner as does the iron rod **n**. The conductor **p** is to be considered as an additional piece to add in that marked **p**. There are likewise put iron spikes in **q**: the support **s** resembles those of **O** and **P** in the former figure. In this new machine you can lengthen or shorten the horizontal conductor as you please; and as the iron ring **i** turns freely in a circular gorge made in the mast, the conductor is enabled to describe the entire area of a circle.

(891.) "The construction of this *electro-vegetometer* once well understood, it will be easy for us to conceive its effects. The electricity which prevails in the aerial regions will soon be drawn down by the elevated points of the upper extremity. This effect of the points is proved by the most decisive experiments, and is called by philosophers the *power of the points*.

(892.) "The electric matter brought down by the point **E**, or by those marked *fff*, will be necessarily transmitted both by the rod and chain; because the insulation produced at the upper extremity of the mast completely prevents its communication with the timber. The electric fluid passes from the chain to the horizontal conductor **KM** or **no**: it then escapes by the points at **P** and **q**; because the same points that have the power of bringing down the electric fluid, have likewise that of pushing it forward; a thing well known by experience.

(893.) "The manner of using this instrument is not more difficult than the knowledge either of its conductor or effects. Suppose, for example, we are to place it in the midst of a kitchen garden. By making the horizontal conductor turn round successively, you will be able to carry the electricity over the whole surface of the proposed ground. The electric fluid thus drawn down, will extend itself over all the plants you want to cultivate; and this at a time when there is little or no electricity in the lower regions nigh the surface of the earth.

(894.) "On the other hand, when it happens that

the electric fluid shall be in too great abundance in the atmosphere, in order to take off the effect of the apparatus in K fig. 4, and in n fig. 5, I have only to hang to it an iron chain reaching to the ground, or else a perpendicular iron rod, which will have the same effect, viz. that of destroying the insulation, and of insensibly transmitting the electric fluid in the same proportion as it is drawn by the points; so that there shall never be an overcharge of this fluid in the instrument, its effect shall be either something or nothing, according as you add or remove the second chain be additional rod.

(895.) "There will be nothing to fear from the instantaneous discharge of this apparatus, because terminated below by proper points in N and both machines; and it is a certain fact, that a pointed conductor makes no explosion, and that instead of flashes there are only luminous streams. Further, it will be easy to furnish one, by means of which we may approach the apparatus with perfect security; it is only necessary to hold the end before it. This has the form of a great C, is of a height equal to the distance that takes place between the horizontal conductor and the top of the earth. This discharger near the end must be furnished with a glass handle; and the extremity which is directed towards the conductor, there must hang an iron chain made fast on the ground. This instrument is an excellent safeguard. See fig. 6.

(896.) "By means of the electro-vegetometer now described, one may be able to accumulate pleasure this wonderful fluid, however distant in the regions above, and conduct it to the top of the earth, in those seasons when it is either withheld, or its quantity is insufficient for vegetation; or although it may be in some degree deficient, yet can never produce the effects of a plentiful and highly increased vegetation. So by these means we shall have an excellent vegetable manure or nourishment brought down as it were from heaven, and that too at an easy expense; for after the construction of this instrument, it will cost you nothing to maintain it: It is moreover the most efficacious you can employ, no other substance being so active, penetrating, or conducive to the germination, growth, ripening, or reproduction of vegetables. Heavenly manure is that which nature employs over the whole habitable earth; not excepting those regions which are esteemed barren, which, however, are often fecundated by agents which nature knows so well to employ for the most useful purposes. Perhaps there is nothing wanting to bring to a completion the useful discoveries that have been made in electricity, but to show this so advantageous an art employing electricity as a manure; consequently all the effects, which we have already mentioned, depend upon electricity alone; and that all these effects, viz. acceleration in germination, the growth, and production of flowers, fruit, and their multiplication, &c. are produced, even at a time when secondary electricity is against it: and all this is brought about by the electric fluid, which we have the art of accumulating over certain portions of the earth where

we want to raise those plants that are most calculated for our use. By multiplying these instruments, which are provided at no expence (since iron rods of the thickness of one's finger, and even less, are sufficient for the purpose), we multiply their beneficial effects, and extend their use *ad infinitum*.

(897.) "This apparatus having been raised with care in the midst of a garden, the happiest effects were perceived, viz. different plants, herbs, and fruits, in greater forwardness than usual, more multiplied, and of better quality. At the same time it was observable, that, during the night, the points P and q, as well as the upper extremities, were often garnished with beautiful luminous sparks. These facts are analogous to an observation which I have often made, viz. that plants grow best and are most vigorous near thunder rods, where their situation favours their development. They likewise serve to explain why vegetation is so vigorous in lofty forests, and where the trees raise their heads far from the surface of the earth, so that they seek, as it were, the electric fluid at a far greater height than plants less elevated; while the sharp extremities of their leaves, boughs, and branches, serve as so many points granted them by the munificent hand of nature, to draw down from the atmosphere that electric fluid, which is so powerful an agent in forwarding vegetation, and in promoting the different functions of plants.

(898.) "This electro-vegetometer may be set up not only in a kitchen garden, but in an orchard, in a field of corn, olive-yard, &c. &c. Everywhere the same effects are produced, namely, fecundity in the soil, quickness of vegetation, increase of produce, superiority in the quality, &c. This machine is applicable to all kinds of vegetable productions, to all places, and all seasons; and if I am to believe the most enlightened and intelligent of my friends, the electro-vegetometer is one of the most noble and useful discoveries that have been made in the present century.

(899.) "Besides the advantages of the electro-vegetometer, there is another very important one, namely, that by applying to it a large electrometer or grand conductor, fig. 7, we may thus find out the electricity of the atmosphere. For this purpose we must take away the points (HR fig. 4, and n, fig. 5.) which are seen in R r. This machine will likewise serve the purpose of a thunder rod, if one takes care to thrust into the earth, to the depth of about 10 or 15 feet, a leaden tube, whose upper extremity may rise a few inches above the surface of the ground; and into this tube you are to pass the long iron chain, or perpendicular rod, set apart for destroying the insulation, and whose upper end is to be hooked to a chain in H, fig. 4, or in k, fig. 5. These two chains are very strong, and are fit for serving as an excellent conductor. Or if you choose, you may substitute in their room webs of white thread, or iron wires, which will make no difference in the effects of the apparatus. In the figures we have preferred chains, that the distinction of the different parts may be the more sensibly perceived. With these additions the electro-vegetometer will be as good a thunder rod as any that are ordinarily constructed.

(900.) "It is not only by means of the electricity in the atmosphere, collected by the above apparatus, that one can supply the electric fluid, which is so necessary to vegetation; but the electricity named *artificial* answers the same purpose. However astonishing the idea may be, or however impossible it may appear to realize it, yet nothing will be found more easy upon trial. Let us suppose that one wants to augment the vegetation of trees in a garden, orchard, &c. without having recourse to the apparatus destined to pump down as it were the electricity from the atmosphere; it is sufficient to have a large insulating stool. This may be made in two ways; either by pouring a sufficient quantity of pitch and melted wax upon the above stool, whose borders being more raised than its middle, will form a kind of frame; or more simply, the stool (which is likewise called the *insulator*) shall only be composed of a plate longer than broad, supported by four glass pillars, like those used for electrical machines. One must take care to place above the insulator a wooden tray full of water, and to cause mount upon the stool a man carrying a small pump in the form of a syringe. If you establish a communication between the man and an electrical machine put in motion (which is easily done by means of a chain that connects with the conductor of the machine,) then the man thus insulated (as well as every thing upon the stool) will be able, by pushing forward the sucker, to water the trees, by pouring upon them an electrical shower; and thus diffusing over all the vegetables under its influence a principle of fecundity that exerts itself in an extraordinary manner upon the whole vegetable economy; and this method has moreover this advantage, that at all times and in all places it may be practised and applied to all plants whatever.

(901.) "Every one knows that the electricity is communicated to the water thus employed; and it would be easy to obtain the most ample conviction, (if any one doubted it,) by receiving upon his face or hand this electrical shower; he immediately feels small punctures or strokes which are the effects of the sparks that issue from each drop of water. This is perceived most sensibly if there is presented a metal dish to this electrical dew; for at the very instant of contact, brilliant flashes are produced.

(902.) "That the electricity received by the man from the chain may be communicated to the tray, we must put a small cake of white iron, upon the end of which he may place his foot. The tray filled with water is a kind of magazine or reservoir to serve as a continual supply to the pump. After watering one tree, you transport the stool to a 2d, a 3d, and so on successively; which is done in a short time, and requires very little trouble.

(903.) "Instead of the chain, it is better to employ a cord or twist of pinchbeck, or any other metal; by means of which there can be no loss of the electric matter, as there is in the case of the chain by the ring points. Moreover, this metal cord or thread being capable of being untwisted and lengthened, there will be no occasion of transporting so often the electrical machine. It is almost needless to add, that this string or metallic cord, which is always insulated, may rest upon

the same kind of supports with those which have been exhibited in OP and 1 of fig. 4, and 5. This method is simple, efficacious, and nowise expensive, and cannot be too much employed.

(904.) "If one wants to water either a parterre or common garden beds and platforms of flowers or any other plots in which are sown grain plants of different ages and kinds, no method more easy and expeditious than the following. Upon a small carriage with two wheels there is placed a framed insulator in form of a cake of pitch and rosin, as we have mentioned before, fig. 4. The carriage is drawn the whole length of the garden by a man or horse fixed to it. In proportion as you draw the carriage, the metal cord winds itself upon a bobbin, which turns usual. This last is insulated, either because of a little apparatus that sustains the bobbin is placed in a mass of rosin (when you choose the axle of iron,) or else because this moveable axis is made of solid glass. There must also be a supply of water which serves to prevent the gold thread or metallic cord from trailing on the ground, thus dissipating the electricity; and, moreover, serves as an insulator. To accomplish this purpose, it is necessary that the ring into which the cord passes be of glass. One may likewise employ insulators and supports marked OP and 1, fig. 4 and 5. If a gardener, mounted upon an insulator, holds in one hand a pump full of water, and with the other takes hold of a metallic cord in order to transmit the electricity which issues from the conductor; in this case, the water thus electrified, you will have an electrical shower which falling on the whole surface of the plants which you want to electrify, will render the vegetation more vigorous and more abundant. A second gardener is to give additional pumps of water to him who is upon the insulator, who shall have emptied those he holds; and thus in a little time you will be able to electrify the whole garden. This method takes hardly longer than the ordinary one; and although it should be a little longer, the great advantages resulting from it will abundantly recompence the small additional trouble.

(905.) "By repeating this operation several times successively, either upon seed sown or plants in the state of growth, you will very soon reap the greatest advantages from it. This operation, equally simple with the preceding described upon the same subject, watering trees, has been put in practice with the greatest success. Several other methods, answering the same purpose, might be devised; but they are all of them pretty similar to that just described.

(906.) "I cannot finish this article without mentioning another method relative to the present subject, although it be much less efficacious than the preceding ones. It consists in communicating the electric fluid to water kept in basins, reservoirs, &c. (for the purpose of watering,) the electric fluid, by means of a good electrical machine. To this end, one must plaster over with a bituminous cement all the interior surface of the basin destined to receive the water that serves for irrigation: the nature of the cement answering the purpose of insulation, prevents the electric fluid that communicates to the water from being dissipated; and the water

thus charged with electricity will be the more fitted for vegetation.

(907.) "The method just now laid down of electrifying water for the purpose of watering trees is both easy and cheap; the expence of the cement being inconsiderable, as it requires but once to be done, and as it prevents the water from filtrating and being lost, as well as from hurting the walls themselves, which would otherwise have occasion to be oftener repaired; consequently you are sufficiently indemnified by its utility for all the trouble you take. A machine applied to the extremity of the axle of the electric apparatus might communicate to it a rotatory movement, and still further diminish the expence of the operation.

(908.) "If the deficiency of the electric fluid, rather a small quantity of it, is apt to be hurtful to vegetables, a too great abundance of this water will likewise sometimes produce pernicious effects. The experiments made by Messrs NAIKNE, LANKS, and other learned men of the Royal Society of London, prove sufficiently this truth. An electric battery, very strong, was discharged upon a branch of balsam still holding by its trunk. Some minutes after, there was observed a remarkable alteration in the branch, of which the less woody parts immediately withered, drooped towards the ground, died next day, and in a short time entirely dried up; at the same time that another branch of the same plant that had not been under the electric chain, was not in the smallest degree affected.

(909.) "This experiment repeated upon other plants showed the same effects; and it was remarked that the attraction, occasioned by a strong discharge of the electricity, produced an alteration different according to the different nature of the plants. Those which are less woody, more herbaceous, more aqueous, experience in proportion impressions that are stronger and much more speedy in their operation.

(910.) "A branch of each of the following plants, upon an electrical chain, it was observed by sensible philosophers, that the balsam was affected by the discharge of the battery in a few moments after, and perished next day. The leaves of a marvel of Peru did not drop till the day following that; and the same phenomenon happened to a geranium. Several days elapsed before there was observed any fatal effect on the cardinal flower. The branch of a laurel did not show any symptoms till after the lapse of about 15 days, after which it died; but it was a full month before they perceived any sensible change on the myrtle; at the same time they constantly observed that the sides of those plants and branches which had passed no part of the chain, continued to be fresh, vigorous, and covered with leaves in good condition.

(911.) "It hardly ever happens that the superabundance of the electric fluid existing in a small portion of the atmosphere where a plant is situated, can be so great as that which took place by the explosion of the strong battery of Mr NAIKNE, directed particularly upon one branch; or if this should happen, it can only be upon a few individual plants in very small number; as when lightning falls upon a tree, breaks it, strips it of its

bark, or withers its leaves; or in the case of blasting or mildew in corn, which several farmers ascribe to the force of lightning. "This sentiment (says M. du Hamel,) has acquired much probability, since the discovery of the great effects of that electricity which is diffused so abundantly in the atmosphere when the weather is disposed to be stormy." (*Blemens d'Agrie*. Tom. I. p. 346.)

(912.) "It is not proposed here to prescribe the means of remedying the pernicious effects which may be produced upon this occasion; as there are none of them in circumstances exactly similar to that of the experiments of the philosopher just now quoted. But although this enormous excess of the electric fluid of which we have been speaking, never takes place through any great extent of space, nevertheless this excess, though even but inconsiderable, may be too great in several respects regarding the vegetable economy; and it is in this case that it is proper to seek the means of remedying it.

(913.) "Let us suppose that one has some plants or shrubs, or some valuable trees or exotics, that he wants to preserve, and is sensible that too great a quantity of electricity predominant in the atmosphere becomes hurtful to them; there are two methods that may serve to obviate the evil of which he is apprehensive. One is, to water plentifully these vegetables, so that their whole surface may be kept sufficiently wet; the consequence of which is, that the electricity prevailing in the atmosphere will be transmitted to the earth by the water adhering to the outside of the plants, as it is well known that water is an excellent conductor of the electric fluid: The other is, to place near these trees metallic points, which may be easily accomplished by simple lathes or wooden poles; along which one must fasten by bandages plain iron wires, so as to overtop them by some inches. These poles thus prepared, being thrust into the earth, will then draw down the electric fluid, and transmit it to the earth."

(914.) M. BERTHOLON next proceeds to consider of methods of destroying the insects which frequently infest and destroy vegetables; which, he thinks, may be obtained by means of the electric fluid.

(915.) "Experience (says he) proves, that in years when vegetation is most vigorous and abundant, insects, if nothing opposes them, will then be most multiplied; and in fact they are sometimes so to an astonishing degree. How great mischief they produce on these occasions, every body knows, and as ardently desires to find a remedy for the calamity. The damage is indeed so considerable, that people imagine it is not possible by any means to put a stop to it; but I am of opinion, it is one of those evils to which electricity may be applied with effect.

(916.) "It has been often remarked, that several species of worms or caterpillars are found in the heart of shoots, twigs, and even the trunks of trees, of shrubs, and of plants of different sorts. There are numbers, for example, in pear and other fruit trees. As soon as the animal has got to the inside of a branch, he forms a gallery according to the length of it: armed with strong scaly jaws, he soon reduces the woody substance to

powder; and this same delicate caterpillar makes the wood, as it is, his favourite nourishment. Other insects generally show themselves in open day: but this one, like a pioneer, marches always in obscurity within; and we are apprised of his presence only by the mischief he produces, namely, by observing the tops of branches to wither, the leaves to fade and incline to the earth, and in fine the whole infected bough to decay and die away. In vain do you seek for this frail though terrible animal on the leaves; he enters the skin and penetrates the thickest bark of the surface; he goes even to the heart of the woody substance; and you can extirpate him only by cutting off the wood; and if this is a remedy, you must confess that it is at least equal to the mischief.

(917.) "This evil so much the more merits attention, that it extends itself particularly over a very great number of fruit trees; in which, for the same reason, we are as particularly interested. Electricity, however, furnishes us with a remedy of the most efficacious sort to stop the progress of the evil, by attacking the enemy in his quarters, and destroying him in his own mine; which in this event is to become his tomb.

(918.) "The Leyden phial, by the mere force of its shock, which can be augmented gradually, is capable of destroying not only rabbits and pigeons, but bulls and oxen, especially when we employ electrical batteries of great size, and containing a great number of electrified jars. Of consequence then it may be employed even with a little apparatus to kill a tender and delicate caterpillar, which, in order to shelter itself from the impressions of the air, is obliged to keep perpetually shut up in the heart of trees, or in that of twigs, branches, or trunks themselves.

(919.) "In order to succeed in killing these animals, at the time when they begin to show their ravages, which mark likewise the place where the caterpillar is concealed, it is sufficient to make an electric chain with two plain iron wires, and to place betwixt the two that part of the tree where it is supposed the insect resides. One need not be afraid of taking in even a larger space, for the experiment will succeed as well in a great extent as in a small; and besides one runs no risk of missing the enemy he wants to combat. Let us suppose, that one be assured from the forementioned symptoms, that there is an insect in the tree; in this case you place iron wires above and below the place where you suspect it to be lodged. Next, you must take care to make the one communicate with the exterior surface of an ordinary jar charged with electricity, and the other with the interior surface, which it is easy to do by bending these iron wires so as to make them approach the electrical jar; then upon discharging this vessel where the electric fluid superabounds, the explosion is made to traverse the part where the animal lodges: the violence of the shock makes him die without recovery, and so destroys the evil in its source. If the ravage has not been carried to a high pitch, the tree recovers very soon, as I have often observed; but whatever be the result as to the re-establishment in certain circumstances, the evil proceeds no further; its progress stops; and

it is always a great advantage to have arrested it in its march.

(920.) "Several experiments have convinced me of the success of this method. Upon cutting off several branches on which I discharged my jar or Leyden bottle, I constantly observed the animal dead; and you never fail of killing it when the distance betwixt the two extremities of the iron wires is not too great, and when you take care to approach or remove them successively by repeating the shock several times.

(921.) "The bottle here employed cannot hurt the vegetable economy, because its dimensions are not too great, and no batteries are brought to play. The electric shock, given in certain bounds is useful to animals; it therefore cannot be dangerous to plants in these circumstances.

(922.) "This operation is not tedious, even when employed upon a great number of trees, but if one wants still further to abridge it, I will give him a method by which the experiment can be made in the same instant upon all the trees in an orchard, and will not be more tedious than it were employed upon one tree only. You need only to provide a sufficient number of iron wires and to dispose them as was done for the first time we spoke of just now, and in the same manner by which means all these trees form an electrical chain, and the fluid, in the explosion of the battery will run over through the whole, supposing you have discharged the bottle in the ordinary way, and at the same time taken care of what is essential, that while the free extremity of the wire touches the exterior surface of the electrical jar, the end of the other may communicate with the inside of the same charged phial.

(923.) "If the caterpillar be in the root, the operation is pretty much the same. By taking away, for an instant, a little earth, you easily reach the affected roots within the chain: but if one is ignorant of the particular ramification of the tree which is attacked without uncovering the root, you need only insert in the earth two wires of different directions, and then perform the Leyden experiment, which is easily done. After having placed these two wires north and south, you may repeat the experiment by placing them east and west. You can hardly then miss the insect, especially if, in order to take in more space, you insert one of the wires farther than the other; in this case the electric fluid will describe a diameter, as we have shown in regard to branches.

(924.) "This method serves not only to prevent the progress of the evil, but in some cases to anticipate it. In regard to these destructive insects there are epochs as for plants; both of them have marked times for their birth, their development, their growth, their multiplication, and their relative both to their genera and species. When the time is come that insects, caterpillars, and other animals attack plants, one must employ the way of precaution, the way we have just now shown; and by repeating the same from day to day for a certain space of time, we will at last succeed in preserving trees from the ravages of insects. The operation is neither tedious nor expensive, why not therefore have recourse to it for the cure?

various and rare trees which come from afar at a great expence, and those valuable other trees that yield us yearly the most delicious fruits?

(925.) "The method just mentioned is the most effectual that can be imagined, since it purchases the enemy to his most concealed corners in the inmost texture of the wood, and is capable of filling him in the very heart of trees, under the bark when he is to be found there, in the branches, and in the heart of the roots themselves: all which we have made appear in the foregoing remarks. I may further add, that there is no other remedy known but by electricity; for how is it possible to find out under the bark of a tree one or more insects that gnaw and destroy it? Must we not in its case strip them entirely of their bark? and would not, therefore, the remedy be often worse than the disease? Besides, by what means could we penetrate into the heart of the tree? Would not the instrument employed to cut and lop it, when add to the mischief, especially in the beginning of its progress? How again could we rummage to the inside of the roots? The tree thus discovered, would it not suffer, especially in the great heats, when a perspiration more abundant must render necessary a nourishment, whose quantity ought at all times to be equal at least to the loss? Thus the celebrated Linnæus, struck with the calamities which fruit trees in particular suffer from insects and their caterpillars, cried out: "Who shall deliver us from this scourge?" "*Quis liberare arbores fructiferas a larvis?*"

(926.) Such is the Abbe BERTHOLON's plan for destroying insects by electricity. Whether his theory will hold good, time and repeated experiments can only determine. His other experiments are called in question by Dr INGEN-HOUSSZ, who after repeated trials is convinced, that vegetation is neither forwarded nor retarded by the action of electricity. But as neither he nor Mr CAVALLO, who agrees with him, object to the latter part of the Abbe's plan, it is to be hoped, that they or others will put his experiments upon the extirpation of insects, and communicate the result to the public upon this very important and interesting subject.

SECT. XXVIII. EXPERIMENTS showing the EFFECTS of ELECTRICITY ON VARIOUS KINDS of AIR.

(927.) The effects of the electrical fluid upon various elastic vapours, were tried to the greatest advantage by Dr VAN MARUM, with his great machine above mentioned, § 377, 464. He used a cylindrical glass receiver 5 inches long, and an inch and a quarter in diameter, into which different kinds of elastic fluids were successively inserted, and were confined by quicksilver or water. To a hole made in the bottom of the inverted glass receiver a iron wire was fastened, the external part of which communicated with a conductor, which being presented to the prime conductor of the machine received the sparks from it. The apparatus being thus disposed, the sparks passed through the elastic fluid in the receiver, by going from the inner extremity of the wire to the quicksilver or water in which the receiver was inverted.

(928.) OXIGENOUS GAS, or DEPHLOGISTICATED AIR, obtained from mercurial red precipitate was found by this apparatus to have lost one 20th of its bulk; but its quality was not sensibly altered, as appeared from examining it with the eudiometer. This experiment being repeated when the receiver was inverted in line water, and likewise in the infusion of turnsole, there ensued no precipitation, no change of colour, nor any phlogistication of the air. On pouring out this air, the usual smell of the electric fluid was very sensibly perceived.

(929.) NITROUS AIR was diminished more than the half of its original bulk; and in that state, being mixed with atmospheric air, it occasioned no red colour, nor any sensible diminution. It had lost its usual smell, and it extinguished a candle. In passing the sparks through the nitrous air, a powder is formed on the surface of the quicksilver, which is a part of that metallic substance dissolved by the nitrous acid.

(930.) HYDROGENOUS GAS, or INFLAMMABLE AIR, procured from iron and diluted vitriolic acid, communicated a little redness to the tincture of turnsole. The stream of electric fluid through this air appeared more red, and much larger, than in common air, being every where surrounded by a faint blue light. Inflammable air, obtained from spirit of wine and vitriolic acid, was increased to about three times its original bulk, and lost a little of its inflammability.

(931.) CARBONIC ACID GAS, or FIXED AIR, from chalk and vitriolic acid, was a little increased in bulk by the action of electricity; but it was rendered less absorbable by water.

(932.) SULPHUREOUS ACID GAS, or VITRIOLIC ACID AIR, obtained from vitriolic acid and charcoal, was diminished a little, and black spots were formed on the inside of the glass receiver. Afterwards it was observed, that only one 8th part of the electrified elastic fluid was absorbed by water. It extinguished a candle, and had very little smell.

(933.) MURIATIC, or MARINE ACID AIR seemed to oppose in great measure the passage of the electric fluid; as the sparks would not pass through a greater length than 2½ inches of this air. It was considerably diminished, but the rest was readily absorbed by water.

(934.) SPATHOUS AIR was neither diminished, nor any other way sensibly altered, by the electric sparks.

(935.) AMMONIACAL GAS, or ALKALINE AIR, extracted from spirit of sal ammoniac, was at first almost doubled in bulk; then it was diminished a little; after which it remained without any augmentation or diminution. It became unabsorbable by water, and by the contact of flame it exploded, like a mixture of inflammable air and a good deal of common air.

(936.) ATMOSPHERICAL, or common AIR was found to give a little faint redness to the tincture of turnsole; becoming at the same time sensibly phlogisticated. The experiment was repeated thrice at different times, and in each time after the electrization it was examined by the admixture of nitrous air in Mr Fontana's eudiometer, and it was compared with the same air not electrified; the latter always suffering the greatest diminution. In the last experiment the diminutions were 145

and 175 five hundredth parts; and in the second, 139 and 194; and in the last, 149 and 178 five hundredth parts.

(937.) Upon trying to repeat Mr CAVENDISH's experiment, (See AEROLOGY, *Index*.) in which he produced the nitrous acid by a mixture of OXYGENOUS GAS, or pure air, with AZOTIC GAS, or phlogisticated air; instead of a syphon, the Doctor made use of a glass tube one 6th part of an inch in diameter, closed at one end, into which an iron wire, one 130th of an inch in diameter, had been inserted: into this tube, filled with mercury, and fixed in a vertical position, was introduced the air with which the experiment was to be tried. The oxygenous gas was obtained from red precipitate, and had been thoroughly purified by alkaline salts, from any acid it might have contained. With a mixture of 5 parts of this, and 3 of atmospheric air, the tube was filled to the height of 3 inches, to which was added five 12ths of an inch of lixivium, of the same kind with that used by Mr Cavendish. The result was, that, after transmitting through the tube a continued stream of the electrical fluid during 15 minutes, 2 inches of the air were absorbed by the lixivium: more air being introduced into the tube till it was filled to the height of 3 inches, when it was again electrified.

(938.) This process was repeated till 8½ inches of air had been absorbed by the lixivium: this was now examined, and found to be, in some degree, impregnated with the nitrous acid; but it was very far from being saturated. With the same lixivium, of which a quarter of an inch remained in the tube, the experiment was continued till 14 inches more of air had been absorbed; but its diminution was not perceived to decrease, though the lixivium had now absorbed 77 measures of air, each equal to its own; whereas, in the experiment related by Mr Cavendish, only 38 measures of air were absorbed by the alkali. But notwithstanding this greater absorption, the lixivium was yet far from being saturated.

(939.) Dr VAN MARUM repeated the experiment with pure air, produced by minium, moistened with the vitriolic acid, and deprived of its fixed air; 7 parts of this were mixed with three of azotic gas and lixivium added to the height of ¼th of an inch. In this, as in the former experiment, the diminution continued without any decrease; and the lixivium, after it had absorbed 21¼th inches, and consequently 178 times its own measure of air, was very far from being saturated with the nitrous acid.

(940.) The Doctor next describes some experiments made by allowing the electric fluid to pass in a continued stream through various kinds of air, inclosed for this purpose in the little glass tube used in the last experiments.

(941.) Oxygenous gas obtained the week before from red precipitate, being placed over mercury, and electrified for 30 minutes, was diminished by one 5th, the surface of the quicksilver soon began to be calcined, and towards the end of the experiment the glass tube was so lined with the calx as to cease to be transparent. Upon introducing a piece of iron, the electric stream passed through

the air without immediately touching the mercury; yet this was equally calcined.

(942.) This phenomenon the Doctor ascribes solely to the dissolution of the pure air, the principle of which unites itself with the metal; as in these experiments the mercury had not acquired any sensible heat. Two inches and 3 quarters of the same kind of air being placed over water, and electrified in the same manner half an hour, lost a quarter of an inch; and being allowed to stand 12 hours in the tube, lost ¼th of an inch more. This was very nearly the same diminution of the air that had taken place when it was electrified over mercury; but, in this case, the process appears to be more slow, and the detached principle not so readily absorbed. The air remaining after these experiments, being tried by the eudiometer, did not differ from unelectrified pure air taken from the same receiver.

(943.) To discover whether the oxygenous gas retained any of the acid employed in its production, Dr Van Marum repeated the experiment with air procured from red precipitate, confined by an infusion of turnsole, but could not perceive in it the least change of colour. He also electrified air obtained from minium and the vitriolic acid, placed over some diluted vinegar of lead, but this was not rendered at all turbid.

(944.) Three inches of azotic gas being electrified during the first 5 minutes were augmented 3¼th inches, and in the next 10 minutes to 5 inches: some lixivium was then introduced, to try whether this would absorb it; but upon being electrified 15 minutes, the column rose to the height of 3½th inches. It was allowed to stand in the tube till the next day, when it was found to have sunk to its original dimensions.

(945.) Nitrous air, confined by lixivium, being electrified during half an hour, lost 3 quarters of its bulk; the lixivium appeared to have absorbed a great deal of nitrous acid; and the air remaining in the tube did not seem to differ from common azotic gas. Some of the same nitrous air, confined by lixivium, was, by standing 3 weeks, diminished to half its bulk, and this residuum proved to be azotic gas. Thus electricity produces speedy effects that separation of the nitrous air from nitrous air, which is slowly produced by lixivium alone.

(946.) Hydrogenous gas obtained from fixed oils and the diluted vitriolic acid, being confined by an infusion of turnsole, was electrified for 15 minutes without any change of colour in the infusion, or any alteration in the bulk of the gas. The tube being filled with the same air to the height of 2½ inches, and placed in diluted vinegar of lead, was exposed to the electric stream for 12 minutes, in which time the inclosed gas rose to 5 inches; but the vinegar remained perfectly clear. Three inches of inflammable air obtained from a mixture of spirits of wine with oil of vitriol, on being electrified for 15 minutes, rose to 10 inches; thus dilated, it lost all its inflammability, and when nitrous air was added, no diminution ensued.

(947.) A column of ammoniacal gas obtained by heat from spirit of sal ammoniac, 3 inches high,

was electrified 4 minutes, and rose to 6 inches, but did not rise higher when electrified 10 minutes longer. It appears that this air is not expanded more by the powerful electric stream from this machine than by the common spark. Water would not absorb this electrified air, which was in part inflammable. The tube, being filled to the height of an inch with spirit of sal ammoniac, and inverted in mercury, was electrified 4 minutes; in which time the tube was filled with 8 inches of air, which is proved to be equally inflammable, and as little absorbed by water as the alkaline air. Hence Dr Van Marum conjectures that this air is only the volatile alkali rendered elastic.

(948.) A remarkable experiment was made, which illustrates some phenomena observed in thunder storms. Two balloons, made of the aluminoides of a calf, were filled with inflammable air, of which each contained about 2 cubic feet. To each of these was suspended, by a silken thread about 8 feet long, such a weight as was just sufficient to prevent it from rising higher in the air; they were connected, the one with the positive, the other with the negative conductor, by small wires about 30 feet long, and being kept near 20 feet asunder, were placed as far from the machine as the length of the wires would admit. On being electrified, these balloons rose up in the air as if by the wire allowed, attracted each other, and uniting as it were into one cloud, gently descended. The rising of these artificial clouds is attributed to the expansion of the air they contain, in consequence of the repulsive force communicated to its particles by electricity: when in contact, their opposite electrical powers destroyed each other, and they recovered their specific gravity by losing the cause of its diminution.

(949.) To render this experiment more perfect, Dr Priestley, the Doctor suspended to the balloon which was connected with the negative conductor, a bladder filled with a mixture of inflammable and atmospheric air, which, being kindled by the spark that took place on the union of these gases, gave a considerable explosion. From these experiments, he explains the sudden elevation of the clouds, and the violent showers of rain and hail, which often accompany thunder storms.

(950.) Dr PRIESTLEY also found, in the course of his experiments upon air and the electric fluid, that, by means of the spark, he could turn vegetable blues to a red colour. We must not, however, suppose that this was any indication of action in the electric fluid, but merely of the decomposition of the acid, and its conversion into fixed or aerial acid. The instrument used in this experiment is a glass tube about 4 or 5 inches long and one or two sixths of an inch diameter in the inside; a piece of wire is put into one end of the tube, and fixed there with cement; a brass ball is fixed on the top of this wire; the lower part of the tube became filled with water, tinged blue with a piece of turnsole or archil. This is easily effected, by setting the tube in a vessel of the tinged water, then placing it under a receiver on the plate of the air-pump; exhaust the receiver in part, and then, on letting in the air, the tinged liquor will

rise in the tube, and the elevation will be in proportion to the accuracy of the vacuum; then take the tube and vessel from under the receiver, and throw strong sparks on the brass ball from the prime conductor.

(951.) The Doctor observed, in making this experiment, that, after the electric spark had been taken between the wire and the liquor about a minute, the upper part of it began to look red; in 2 minutes it was manifestly so, and the red part did not readily mix with the liquor. If the tube was inclined when the sparks were taken, the redness extended twice as far on the lower side as on the upper. In proportion as the liquor became red, it advanced nearer to the wire, so that the air in which the sparks were taken was diminished; the diameter amounted to about one fifth of the whole space; after which, a continuance of the electrification produced no sensible effect.

(952.) In order to discover whether the cause of the change of colour was in the air or in the electric matter, Dr Priestley expanded the air in the tube by an air-pump, till it expelled all the liquor, and admitted fresh blue liquor in its place; but after this, electricity produced no sensible effect on the air or on the liquor; so that it was clear, that the electric matter had decomposed the air, and made it deposit something of an acid nature. The result was the same with wires of different metals. It was also the same when, by means of a bent tube, the spark was made to pass from the liquor in one leg to the liquor in the other. The air thus diminished was in the highest degree noxious.

(953.) The electric spark, in passing through different elastic fluids, appears of different colours. In fixed air, the spark is very white; in inflammable and alkaline air, it appears of a purple or red colour. Hence we may infer, that the conducting power of these airs is different, and that fixed air is a more perfect non-conductor than inflammable air. The spark was not visible in air from a caustic alkali made by Mr Lane, nor in air from spirit of salt; so that these seem to be more perfect conductors of electricity than water or other fluids.

(954.) The electric spark, taken in any kind of oil, produces hydrogenous gas. Dr Priestley tried it with ether, oil of olives, oil of turpentine, and essential oil of mint, taking the electric spark in them without any air to begin with; inflammable air was produced in them all.

(955.) On taking a small electric explosion for 24 hours, in an inch of fixed air, confined in a glass tube one sixteenth of an inch diameter, Dr Priestley found, that when water was admitted to it, only one sixth of the air was imbibed. Probably the whole would have been rendered immiscible in water, if the electrical operation had been continued a sufficient time.

(956.) The electric spark, taken in alkaline air, appears of a red colour; the electric explosions, which pass through this air, increase its bulk; so that, by making about 200 explosions in a quantity of it, the original quantity will be sometimes increased one fourth. If water is admitted to this air, it will absorb the original quantity, and leave about as much elastic fluid as was generated by the

be sealed hermetically: let the other end be cemented into a brass cap with a valve, or into a brass cock, so that it may be fitted to the plate of an air pump. When it is exhausted, let the sealed end be applied to the conductor of an electric machine, while the other end is either held in the hand or connected to the floor. Upon the slightest excitation the electric fluid will accumulate at the sealed end, and be discharged thro' the inside in the form of a spark, and this accumulation and discharge may be incessantly repeated till the tube is broken. By this means I have had a spark 42 inches long; and had I been provided with a proper tube, I do not doubt but that I might have had a spark of four times that length. If, instead of the sealed end, a bulb be blown at that extremity of the tube, the electric light will fill the whole of that bulb, and then pass through the tube in the form of a brilliant spark, as in the foregoing experiment; but in this case I have seldom been able to repeat the trials above 3 or 4 times before the charge has made a small perforation in the bulb. If, again, a thermometer filled with mercury be inverted into a cistern, and the air exhausted, in the manner I have described for making the experiment with the gage, a Torricellian vacuum will be produced; and now the electric light in the bulb, as well as the spark in the tube, will be of a vivid green; but the bulb will not bear a frequent repetition of charges before it is perforated in like manner as when it has been exhausted by an air-pump. It can hardly be necessary to observe, that in these cases the electric fluid assumes the appearance of a spark †, from the narrowness of the passage through which it forces its way. If a tube 40 inches long be fixed into a globe 8 or 9 inches in diameter, and the whole be exhausted, the electric fluid, after passing in the form of a brilliant spark throughout the length of the tube, will, when it gets into the inside of the globe, expand itself in all directions, entirely filling it with a violet and purple light, and exhibiting a striking instance of the vast elasticity of the electric fluid.

(972.) "I cannot conclude this paper without acknowledging my obligations to the ingenious Mr Brook, of Norwich, who by communicating to me his method of boiling mercury, has been the chief cause of my success in these experiments. I have lately learned from him, that he has also ascertained the non-conducting power of a perfect vacuum; but what steps be took for that purpose, I know not. Of his accuracy, however, I am so well convinced, that had I never made an experiment myself, I should, upon his testimony alone, have been equally assured of the fact. To most of the preceding experiments Dr Price, Mr Lane, and some others of my friends, have been eye-witnesses; and I believe that they were as thoroughly satisfied as myself with the results of them. I must beg leave to observe, to those who wish to repeat them, that the first experiment requires some nicety, and no inconsiderable degree of labour and patience. I have boiled many gages for several hours together without success, and was for some time disposed to

believe the contrary of what I am now convinced to be the truth. Indeed, if we reason *a priori*, I think we cannot suppose a perfect vacuum to be a perfect conductor without supposing an absurdity; for if this were the case, either our atmosphere must have long ago been deprived of all its electric fluid, by being every where surrounded by a boundless conductor, or this fluid must pervade every part of infinite space; and consequently there can be no such thing as a perfect vacuum in the universe. If, on the contrary, the truths of the preceding experiments be admitted, it will follow, that the conducting power of our atmosphere increases only to a certain height, beyond which this power begins to diminish, till at last it entirely vanishes; but in what part of the upper regions of the air these limits are placed, will not presume to determine. It would not perhaps have been difficult to have applied the result of some of these experiments to the explanation of meteors, which are probably owing to an accumulation of electricity. It is not, however, a present design to give loose to my imagination, I am sensible, that by indulging it too freely, no harm is done to real knowledge; and therefore that one fact in philosophy, well ascertained, more to be valued than whole volumes of speculative hypotheses."

(973.) Mr Morgan adds in a note, the following account of the method of making the gage.

(974.) "Mr Brook's method of making mercurial gages is nearly as follows: Let a glass tube L, (fig. 8, Plate CXXXIV.) sealed hermetically at one end, be bent into a right angle within two or three inches of the other end. At a distance of about an inch or less from the angle let a bulb K, of about $\frac{1}{4}$ th of an inch in diameter, be blown in the curved end, and let the remainder of this part of the tube be drawn out so as to be sufficiently long to take hold of when the mercury is boiling. The bulb K is designed as a receptacle for the mercury, to prevent it boiling over; and the bent figure of the tube adapted for its inversion into the cistern; for breaking off the tube at M within $\frac{1}{4}$ th or $\frac{1}{2}$ th of an inch of the angle, the open end of the gage may be held perpendicular to the horizon when it is dipped into the mercury in the cistern, without obliging us to bring our finger or any other substance into contact with the mercury in the gage, which never fails to render the instrument imperfect. It is necessary to observe, that if the tube be 14 or 15 inches long, I have never been able to boil effectually for the experiments mentioned in the paper in less than 3 or 4 hours, although Mr Brook seems to prescribe a much shorter time for the purpose; nor will it even then succeed, unless the greatest attention be paid that no bubbles of air lurk behind, which to my own mortification I frequently found to have been the case: but experience has at length taught me to guard pretty well against this disappointment, particularly by taking care that the tube be completely dry before the mercury is put into it; for if this caution be not observed, the instrument can never be made perfect."

† "By cementing the string of a guitar into one end of a thermometer tube, a spark may be obtained as well as if the tube had been sealed hermetically."

fect. There is, however, one evil which I have not yet been able to remedy; and that is, the introduction of air into the gage, owing to the imbedded mercury in the cistern: for when the gage has been a few times exhausted, the mercury which originally filled it becomes mixed with that into which it is inverted, and in consequence the vacuum is rendered less and less perfect, till at last the instrument is entirely spoiled. I have just constructed a gage so as to be able to boil the mercury in the cistern, but have not yet ascertained its success."

(975.) "A fact so contrary to the generally received opinion of the conducting powers of a vacuum," (Mr Tytler observes on Mr Morgan's experiments,) "could not but excite a general surprise, and attempts to repeat the experiment would no doubt be ardently wished for. Unfortunately, however, the experiment itself, as must plainly appear from the account given of it by Mr Morgan, is of such a precarious nature, as it undoubtedly discourages any ordinary electrician from attempting it; for in the first place, there is no hope of success without a very tedious boiling of mercury in a tube for several hours; and even when this is done, the instrument will remain in a state of perfection for any length of time. Mr Cavallo, who has greatly improved the air-pump, gives an account of some very curious experiments made with this instrument, in order to ascertain the truth of Mr Morgan's position; which we shall likewise give in his own words, with the conclusions he draws from them."

(976.) "I. In a glass receiver, of six inches diameter, and nine inches in height, having a brass ball, and a brass wire of two 10ths of an inch in diameter fixed to its cap, and proceeding through the middle of the receiver, its lower extremity was 4 inches distant from the aperture of the receiver, and of course of the plate of the air pump, when the receiver was placed upon it. A fine linen thread was fastened towards the top of the wire, and 4 inches of it hung freely along the brass ball, and almost in contact with it. The extremity of the wire, which passing through the brass ball projected out of the receiver, was furnished with a ball."

(977.) "Thus prepared, the receiver was placed upon the plate of the pump, without any oil, or any thing else besides a little oil on its slide edge, which must be always understood of all the other experiments related in the course of this chapter. Then the exhaustion was commenced, and at intervals some electricity was communicated, either by the approach of the conductor of an electrical machine or the knob of a charged Leyden jar, to the brass ball of the wire, in order to observe the strength of the repulsion of the thread on the wire in different degrees of rarefaction; and such degrees were ascertained by the short barometrical gage. Proceeding in this manner, it was observed, that till the rarefaction did not exceed 20, to wit, till the air remaining within the receiver was not less than the 200th part of the original quantity, whenever the electricity was communicated to the brass ball, the thread first adhered to the wire, and then was repelled by it; but as the repulsion became smaller and smaller, according as the exhaustion came nearer to the a-

bove mentioned degree. The clinging of the thread to the wire first, was because being dry, it required some time before it acquired a sufficient quantity of electricity from the wire, and consequently it was not immediately repelled. When the air within the receiver was exhausted above 100 times, the thread was not first attracted and then repelled as before, but only vibrated a little backwards and forwards, and then remained in the situation in which it stood when electricity was not concerned. By exhausting the receiver still farther, the vibration of the thread when electrified was gradually diminished; so that when the degree of rarefaction was above 500, sparks and the discharge of a jar only made the thread vibrate in a manner just sensible; but this vibration, however small, did never become quite insensible, even when the receiver was exhausted to the utmost power of the pump, which was very near 1000. After this the air was gradually admitted into the receiver, and at various intervals the ball of the brass wire was electrified, in order to observe whether the same phenomena appeared at the different degrees of exhaustion as had done before; and they were found to agree with sufficient exactness."

(978.) "II. The brass wire within the same glass receiver was made very short, and from its extremity a fine linen thread, six inches long, was suspended; and upon the plate of the pump a small brass stand with a brass pillar was placed: so that when the receiver was put upon the plate, and over the brass stand, about one inch length of the thread stood parallel to, and at various required distances from, the brass pillar. (This distance was altered by turning the brass wire which passed through a collar of leather in the brass cap of the receiver.) In this disposition of the apparatus, whenever any the least quantity of electricity was communicated to the knob of the brass wire, the thread was immediately attracted by the brass pillar, and adhered to it some time, because, being dry, it did not immediately part with the acquired electricity. At various degrees of exhaustion, the electricity being communicated to the brass ball of the wire, it was found, that the thread was always attracted by the brass pillar, though from a greater or less distance, according as a greater or less quantity remained within the receiver. Thus when the air was rarefied about 100 times, the thread was attracted from about one inch; when the air was rarefied 200 times, it was attracted from about $\frac{1}{2}$ th of an inch; when the air was rarefied 300 times, it was attracted from about one 10th; and after this it was always attracted from about one 20th, even when the air within the receiver was rarefied about 1000 times. It is remarkable, that when the air in the receiver is rarefied about 300 times, if a jar is discharged through the vacuum, by touching its knob with the ball of the wire on the receiver, the thread is not in consequence of it attracted by the brass pillar: the reason of which seems to be, because that a large quantity of electricity opens a way thro' the vacuum, and passes through every part of it; whereas a small quantity of electricity, even the action of a small electrical machine in the same room, at no very great distance from the apparatus,

the, will cause the thread being attracted by the brass pillar.

(179.) " III. The brass stand, with the pillar, and the thread which proceeded from the wire, being removed from under the receiver, a very sensible electrometer was fastened, instead of the thread, to the extremity of the brass wire." This electrometer consisted of two very fine silver wires, each about one inch long, and having a small cone of cork at its extremity. The sensibility of such an electrometer is really surprising; for even the electricity of a single hair excited, does sensibly affect it; and, as its suspension is almost without any friction or other impediment, it never deceives one by appearing to be electrified when in reality it is not so. With this preparation, the receiver being placed upon the plate of the air pump, the air was gradually exhausted, and at intervals some electricity was communicated to the ball on the outside of the receiver, either by an excited electric or by a charged jar; and it was found that the corks of the electrometer were always made to diverge by it, even when the air was exhausted as much as possible. Indeed their divergency was smaller and smaller, and lasted a shorter time, according as the air was more exhausted, but it was visible to the last.

(180.) " In this experiment, analogous to what has been observed in the preceding, when the air was exhausted above 300 times, if a jar was discharged through the vacuum, or a strong spark was given to the knob on the top of the receiver, the corks of the electrometer diverged very little indeed, and but for an instant; whereas a small quantity of electricity made them diverge more, and remain much longer in that state.

(181.) " It seems deducible from those experiments, that electric attraction and repulsion take place in every degree of rarefaction, from the lowest to about 1000, but that the power diminishes in proportion as the air is more and more rarefied; and by following the law we may perhaps conclude with F. BECCARIA, that there is no electric attraction nor repulsion in a perfect vacuum: though this will perhaps be impossible to be verified experimentally; because when in an exhausted receiver no attraction or repulsion is observed between bodies to which electricity is communicated, it will be only suspected, that those bodies are not sufficiently small and light. But if we consult reason, and which alone ought to assist us, when decisive experiments are not practicable, it seems likely that electric attraction and repulsion cannot take place in a perfect vacuum, by which I only mean a perfect absence of air; because either this vacuum is a conductor or a non-conductor of electricity. If a conductor, and nearer to perfection as it becomes more free from air, it must be a perfect conductor at the same time that it becomes a perfect vacuum; in which case electric attraction or repulsion cannot take place among bodies inclosed in it; for, according to every notion we have of electricity, those motions indicate or are the consequence of the intervening space in some measure obstructing the free passage of the electric fluid. And if the perfect vacuum is a perfect non-conductor, then neither electric attraction nor repulsion can happen in it.

(182.) " IV. In my former experiments, having always observed the electric light in the receiver of the air pump, even when the air was rarefied to the utmost power of that machine, I thought proper to repeat that experiment with receivers of various sizes; and accordingly have used receivers of above two feet in height, and some of as large a diameter as the plate of the pump could admit, which is about 14 inches; but the light in it was always visible, only with different colours in different degrees of exhaustion, and always more diffused, and at the same time less dense, when the air was more rarefied; which seems to render it probable, that when the air is quite removed from any space, the electric light is no longer visible in it, as must have been the case with the experiment of Mr Walth's double barometer; for it is a maxim very well established in electricity, that the electric light is only visible when the electric fluid, in passing from one body to another, meets with some opposition in its way; and according to this proposition, when the air is entirely removed from a given receiver, the electric fluid passing through that receiver cannot show any light, because it meets with no opposition; but this is not account for the receiver ever becoming a conductor.

(183.) " Having just mentioned, that according as the air is more and more rarefied in a receiver, so the electric light becomes gradually more faint, it will be proper to add, that the electric light is more diffused and less bright in an exhausted receiver than in air: Thus, when the receiver is exhausted, the discharge of a jar through the part of it will appear like a small globe exceedingly bright; but when the receiver is exhausted, the discharge of the same jar will fill the whole receiver with a very faint light: whereas some persons, by seeing the whole receiver illuminated, are apt to say that the light of electricity is rendered stronger and greater by the exhaustion.

(184.) " V. It is mentioned by Mr NAIRES, in the 67th vol. of the *Phil. Trans.* that having put a piece of leather, just as it comes from the tanner, into the receiver of an air pump, and afterwards having rarefied the air in it 148 times, the electric light appeared very faint in it; whereas, without the leather, and even when the air was much more rarefied, the light of the electric fluid, when made to pass through the receiver, was much more apparent. In consequence of this observation, I suspected that a little moisture in the receiver, or some other effluvia of substances, might perhaps prevent the appearance of the electric light in rarefied air; and with this view I began to put various substances successively into the receiver; and after rarefying the air, and working the pump, some electric fluid was made to pass through the receiver.

(185.) " When a piece of moist leather was put into the receiver, the air could not be rarefied above 100 times, and the electric light appeared divided into a great many branches; though at the same time another sort of faint light filled up the whole cavity of the receiver.

(186.) " When a linen rag, moistened with a mixture of spirit of wine and water, was put into the receiver, the pump could not exhaust a
bore

bove 40 inces, and the light of electricity appeared divided into many branches.

(987.) "A wine glass full of olive oil placed under the receiver, prevented very little the exhaustion of the pump, the air being rarefied above 400 times. The electric light appeared exactly as it usually does in the same degree of rarefaction when no oil is under the receiver, viz. a uniform faint light inclining to purple or red.

(988.) "Concentrated vitriolic acid placed in a glass under the receiver, produced no particular effect. As for the other mineral acids, they were not tried, because, being volatile, they would have damaged the pump.

(989.) "Dry solids, that had a considerable smell, as sulphur, aromatic woods previously made very dry, and some resins, produced no particular effect, any more than some of them prevented a very great degree of exhaustion, owing to some mixture which still adhered to them.

(990.) "From these experiments it appears, that in the utmost rarefaction that can be effected by the best air pump, which amounts to about 1000, both the electric light and the electric attraction, though very weak, are still observable: but, 2dly, that the attraction and repulsion of electricity become weaker in proportion the air is more rarefied, and in the same manner the intensity of the light is gradually diminished. Now, by reasoning on this analogy, we may conclude, that both the attraction and the light will cease in a perfect absence of air; but this will not account for this perfect vacuum ever becoming a non-conductor of electricity; for since the electric fluid is very elastic, and expands itself with more and more freedom in proportion as the distance of the air is removed, it seems unnatural that it should be incapable of pervading a perfect vacuum: however, the fact seems to be fully ascertained by Mr WALSH and Mr MORAN; and the only thing that remains to be done to investigate the cause of so remarkable a property." See § 289, 290.

KT. XXX. EXPERIMENTS proving the THEORY of a SINGLE ELECTRIC FLUID.

(991.) Mr CAVALLO, after stating some propositions on the repulsion of bodies possessed of the same sort of electricity, and recapitulating his arguments in favour of the Franklinian theory, the substance of which we have given in the preceding article, has the following experiments and reasoning, on the theory of a single electric fluid. The other experiments (says he) which have been considered as repugnant to the Franklinian hypothesis may be almost all reduced to this, viz. that in making the discharge of a Leyden phial, or highly charged, through a long circuit, the effect of the discharge is more sensibly felt by those parts of the circuit, which lie near the two coatings of the phial, than by the middlemost parts of the circuit which lie farther off. But very little consideration is required to shew, that the explanation of that phenomenon, upon the above mentioned hypothesis, is not attended with any difficulty. I shall, however, for the sake of perspicuity describe 2 or 3 of these experiments, and shall afterwards subjoin a general explanation.

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(992.) "EXP. I. Charge a Leyden phial very weakly, viz. so as just to afford a visible spark when discharged; then apply a finger of one hand to the outside, and a finger of the other hand to the inside coating of it. The effect will be, that the slightest pricklings will be felt on these fingers and nowhere else. Charge the phial a little higher, then apply the fingers to its two coatings as before, and a sharper sensation will be felt all along the two fingers. If the phial be charged still higher, the sensation will be felt as high as the wrists; with a greater charge, the sensation will be felt in the arms, &c.

(993.) "EXP. II. Insulate a great number of metallic balls or bars, or, in short, any conducting substances, and dispose them so as to be within a small distance of each other, but not in actual contact. The distance between any two contiguous bodies ought to be equal, which may be easily done by interpolating a card, or something else of a proper thickness, when the bodies are situated in their places, but not to remain between them. Let this interrupted circuit form the communication between the two sides of a charged Leyden phial; and it will be found, that when the charge of the phial is very weak, sparks will be seen between these interruptions of the circuit, which are near the two coated surfaces of the phial; if the charge be higher, the sparks will be extended through more interruptions; and if the charge be still higher, the sparks will be seen through all the interruptions of the circuit.

(994.) "EXP. III. Take a pretty long glass tube furnished with metallic caps at both ends, one of which caps must have a stop-cock, and exhaust it of air by an air-pump. Then let this exhausted tube form part of the circuit between the inside and outside of a charged Leyden phial; and it will be found that when the charge of the jar is very weak, the two ends only of the tube will be illuminated; whereas, when the charge is sufficiently high, the light will pervade the whole cavity of the tube from end to end.

(995.) "In these and many similar experiments, those persons who wish to find fault with the hypothesis of a single electric fluid, imagine that a double current and two distinct powers must necessarily exist. They are satisfied with the slight evidence of their senses, and do not give themselves the trouble of considering the matter any farther.

(996.) "In order to show that those appearances are perfectly and unequivocally explainable on the theory of a single electric fluid, I shall just mention two known truths, viz. 1st, That the condensation of an elastic fluid, such as the electric fluid is supposed to be, is inversely as the spaces in which it is confined. Thus when a certain quantity of it is confined in half the space, it is then said, that its condensation is double of what it was before; when it is confined into the 10th part of the original space, the condensation is ten times greater and so on. 2dly, That the effects produced by a certain quantity of electricity, such as the spark, shock, &c. are proportional to its condensation. Thus the highest charge of a pint phial will give a man a much greater shock, than he would wish to receive; yet if that

charge be communicated to a battery of 100 square feet, and the same man apply his hands to the two sides of that battery, he will hardly feel the shock; because the same quantity, which, in the former case, was confined into a small space, loses the greatest part of its power, when it comes to be rarefied into a much larger space."

(997.) After some farther illustration of his experiments, Mr CAVALLO concludes thus: "The peculiar merits of different hypotheses on any philosophical subject, are not to be derived from those phenomena, which admit of an easy explanation upon different suppositions, but they must be determined by those which can only be explained upon one theory and no other. Therefore the foregoing experiments will not render the hypothesis of a single electric fluid more probable than some other electric hypotheses; but the experiments which render that hypothesis more likely to be true, are those which show an evident current from the positive to the negative side in the discharge of a Leyden phial; or, in general a current from a body positively electrified, and towards a body negatively electrified; since those experiments do not admit of an easy explanation on any other hypothesis. Therefore the object of this section has been only to show, that those experiments, which are considered as contradictory to the theory of a single electric fluid, are so far from contradicting it, that they may be clearly and satisfactorily explained by it."

SECT. XXXI. *Of the PREPARATION of the ELECTRICAL AMBER VARNISH.*

(998.) We shall conclude the practical part of this treatise, with another extract from Mr Cavallo's 3d and last vol. containing his method of preparing the electrical amber varnish.

(999.) "It is well known (says he) that glass frequently becomes a conductor of electricity, in consequence of its being apt to attract moisture from the atmosphere. To avoid this inconvenience, the makers of philosophical instruments generally cover glass legs and other parts of the electrical apparatus with a coat of some non-electric substance. Sealing wax and amber varnish have been principally used for this purpose. The sealing wax has been laid on the glass two different ways; viz. either by making the glass sufficiently hot, and then rubbing a piece of sealing wax upon it, or by first dissolving the sealing wax in spirit of wine, and then laying it upon the glass with a hair pencil. The first of these methods is in my opinion the best, but it is not practicable with large pieces of glass; for, besides the danger of breaking the glass, when a large piece of that substance has acquired the degree of heat that is sufficient for the purpose, it will retain that heat so long as to dry the sealing wax too much.

(1000.) "The electrical amber varnish, when properly prepared, and carefully laid upon the glass, will preserve its insulating property full as well as the sealing wax, which is applied by means of heat; but the preparation of this varnish requires a great deal of attention; for if it be not properly made, the glass will not in the least be improved by it. I shall therefore be as particular

as I can in describing the process, and in pointing out the causes which are most likely to prevent its success.

(1001.) "PREPARATION OF THE AMBER. Reduce some pieces of amber (the yellow is the best) into tolerably fine powder, and then melt it in an unglazed earthen vessel, over a charcoal fire. When melted, pour it whilst fluid upon an iron plate, and as soon as it is cold, it must be pounded and sifted through a very fine sieve. It must not be expected that amber will melt into as fluid a state as water or oil; for it will hardly acquire the fluidity of cold honey, and therefore it must not be kept upon the fire longer than may be necessary to produce that effect, otherwise it will be burned.

(1002.) "PROCESS FOR MAKING THE VARNISH. Half a pint of linseed oil, one oz. of *Saccharum Saturni*, and 1½ oz. of litharge must be set to boil in an iron pot over a charcoal fire. As soon as the oil has dissolved the two other ingredients, 1½ oz. of the prepared amber must be added, and then the whole must be left to boil to proper degree of consistence. Lastly, it must be mixed with such a quantity of spirit of turpentine as will bring it to the consistence of olive oil. I shall now subjoin the necessary precautions.

(1003.) "The capacity of the boiler should be at least 4 or 5 times greater, than the bulk of the materials, in order to allow for the swelling of the composition, which is very considerable towards the latter end. For the same reason the boiler must be constantly watched, and must not be removed from the fire whenever the liquor comes near the top; for if any of it run over, it will be spoiled. The mixture should be stirred every 2 or 3 minutes, but after it has boiled for a hour, it should be stirred oftener. An iron ladle is well fitted for this purpose.

(1004.) "The consistency of the liquor when it has boiled sufficiently; for if at that time a drop of it be rubbed between two knife blades and the blades are afterwards separated, the varnish will stretch like a continued thread from one blade to the other. When this effect takes place, the pot may be removed from the fire and left to cool, but before it becomes quite cold, the spirit of turpentine must be mixed with it. The way of forming this mixture is to put the spirit of turpentine into a basin; then to add one ladleful of the varnish at a time, and to stir it until it is quite dissolved in the spirit. The varnish must then be put in bottles and kept for use.

(1005.) "If the composition has been boiled too much, the colour of the varnish, when mixed with the spirit of turpentine, instead of a brownish yellow, will be dark brown; and if it has been boiled sufficiently, the varnish, when laid upon the glass, will always retain a degree of clamminess. This clamminess is likewise produced when the litharge and the *saccharum saturni* are not very dry. It will therefore be proper to dry those articles thoroughly previous to their being mixed with the oil.

(1006.) "This varnish is laid upon the glass by means of a hair pencil, and one coat of it is quite sufficient to preserve the insulating property of the glass."

glass: but care should be taken to render the glass perfectly clean and dry, and to warm it previously to the application of the varnish.

(1007.) "If the varnish has been rightly prepared it will dry very speedily; but for greater security, it will be advisable to leave the varnished glass in a dry place for a day or two in summer, and a little longer in winter."

PART IV.

MEDICAL ELECTRICITY.

SECT. I. *Of the ORIGIN, IMPROVEMENT and ADVANTAGES of MEDICAL ELECTRICITY.*

(1008.) The application of the electric fluid to medical purposes took its rise not long after the discovery of the electrical machine. The first idea of its probable utility, in this respect, appears to have arisen from observing the effects produced by it upon those who, from curiosity, submitted to be electrified; although the fear natural to persons, who first venture to make such experiments, doubtless led them to magnify these effects, and to ascribe to electricity all those consequences which probably arose from their own apprehensions; such as increase of pulsation, heat, perspiration, &c.

(1009.) Mr CAVALLO says, that "the number of patients electrified at that time is prodigious, and the pretended cures effected by it were wonderful indeed. Accounts of those miracles performed by electricity were published in various parts of Europe;" (See § 32, 33.) "together with the method of electrifying the patients; to which were added such theories as, allowance being made for the infancy of electricity at that time, could seem impossible ever to have been proposed to the public. These theories were usually supported by the account of experiments which have been proved false upon examination." (See § 34.)

But at present a much better acquaintance with the science of electricity than philosophers had about 30 or 40 years ago, and less faith in the accounts of the generality of those persons, whose interest it is to promote the use of electricity in medicine, has pointed out the effects of that power upon the human body, in various circumstances, and has shewn how far we may confide in it; establishing upon indisputable facts, that the power of electricity is neither that admirable *panacea* was considered by some fanatical and interested persons, nor so useless an application as others have asserted; but that when properly managed, is an harmless remedy, which sometimes instantaneously removes divers complaints, generally cures, and often perfectly cures various disorders, some of which could not be removed by the utmost endeavours of physicians and surgeons.

(1010.) "When the first rumour occasioned in Europe by the accounts of many pretended, and a few real wonders, performed by electricity, and in some measure subdued, many creditable and experienced physicians, who justly considering it as their duty, had undertaken to examine the power of this new remedy, published some unsuccessful applications of electricity in divers diseases; in which cases they had not only pre-

scribed the electrization, but the operation had been performed either by themselves or under their inspection. These publications gave a new turn to the reputation of medical electricity; and since that time the generality of physicians and surgeons had not the least regard for its medical application; so that the practitioners of it were rather considered as fanatics and impostors. However, an attentive examination of this subject, after several trials, and after overcoming in a great measure the rooted prejudice among physicians, began to establish anew the reputation of medical electricity; and shewed that many applications of electricity, published in the above-mentioned accounts, had proved unsuccessful, because the operation was not managed properly; so that it had been the abuse, and not the use of electricity, that had proved unsuccessful, and in some cases even detrimental; for at that time, strong shocks and strong sparks were generally administered, which a long series of experiments and observations has proved to be generally useless or hurtful. Mr LOVER, who practised medical electricity for a long time was, as far as I know, the first who protested against the use of strong shocks; and in an essay of his intitled *Subtil Medium proved*, asserts, the shocks to be used in medical electricity should be very small; by which treatment he hardly ever failed of curing or at least relieving his patients."

(1011.) ELECTRICITY differs from other medical applications in this, that it requires not so much a thorough knowledge of the distemper, as a peculiar nicety in conducting the operation. For, however paradoxical this may appear, it is certain that the electric shock is by no means prejudicial to persons in health, and therefore to electrify a sound part of the body along with a diseased one, can do no harm. The degree of electrization must be regulated rather by the patient's feelings, than by the species of disease, and therefore nosology is not an indispensably necessary branch of science to the medical electrician.

(1012.) There can be no doubt, however, that medical electricity will have every chance of being best applied, as well as improved by skilful physicians or surgeons, whose knowledge of anatomy, as well as of nosology, will enable them to direct the electrical fluid, to the most proper part of the body, and to pass it through the most minute vessels, according to the nature of the disease and the part of the body affected. And it is to be hoped, that in such skilful hands, this useful branch of the science may be brought to perfection, by the discovery of easier and more certain methods of applying the electric fluid with the best effects, in different diseases.

(1013.) "The superiority of electricity," says Mr Cavallo, "over other remedies, in many cases, may appear from considering, that medicines in general cannot always be confined to a particular part of the body, and to let them pass through other parts is often dangerous, for which reason they cannot be used; besides that after those medicines have exerted their required power, they are with great difficulty, if at all, separated from the body. But it is of no consequence, whether the power of electricity passes through this or that

other part of the body, in order to come at the seat of the disease; and after having exerted its action, it is instantly dispersed. Hence it appears why electricity has often cured such obstinate disorders as have not yielded to any other treatment."

SECT. II. Of the APPARATUS necessary for the MEDICAL APPLICATION OF ELECTRICITY.

(1014.) The apparatus for medical electricity, besides the electrical machine already described, (PART III. SECT. II.) consists of the following articles: 1. An insulating stool with glass feet, or, what is much better, an arm chair, well rounded at the edges of the wooden parts, and fixed on a large stool with glass feet, which should be at least 9 or 10 inches in length; for the longer the feet are, the better will the insulation be. The inside part of the back of the chair should move on an hinge, that it may occasionally be let down to the stool, and the back of the patient be thus electrified more conveniently; the arms of the chair should be made longer than ordinary. 2. A Leyden bottle with a discharging electrometer. 3. A pair of directors of considerable size, with glass handles and wooden points. 4. A large metallic ball of brass or copper, with a metallic handle to receive the sparks. The ball should be unscrewed, and the wire long and sharp pointed to receive the stream of electric fire. 5. A few glass tubes of different bores, some of them with capillary points. 6. Several yards of brass wire or chain; or, which is much better, several lengths of wires with loops at the end; the part of the wire between these being covered with some non-conducting substance, as a silk ribbon, &c.

(1015.) The directors are represented on Plate CXXXIV. fig. 9. the handles being of glass, one of them having a ball on its end represented by A; the other is without the ball, having its wire bent for the convenience of conducting the electric stream on the eye, &c. Either of the balls may be unscrewed from the wires, and the wooden point B screwed in its place, or the pointed end of the brass wire used. The glass handles should be held as far from the brass work as possible. To convey the electric fluid to the ear or throat, glass tubes with sliding brass wires through them should be made use of, such as are represented in fig. 10. and 11.

(1016.) FIG. 12. represents the electric forceps, which is thought by some electricians to be more convenient for giving the shock than the directors. FIG. 13. is the medical jar, with an electrometer, that regulates the strength of the shock, and enables the operator to give a succession of them of nearly equal force. On the upper part of a bent piece of glass C is cemented a brass socket D, which is fastened to a spring tube E; a wire F moves in this tube, so that the ball G may be set at any required distance from the ball H. The end I of the bent piece of glass is also cemented to a spring tube, which slides upon the wire K, communicating with the inside of the jar.

(1017.) In using this medical jar, the ball H must be placed in contact with the conductor of the electrical machine, or at least be connected with it by a wire; after which it is to be charged in the usual manner. If a wire proceeds from the ball

L to the outside coating, the jar will be immediately discharged, as the accumulation of the electric fluid is sufficiently powerful to pass through the space of air between the two balls: hence a shock may be communicated to the arm by means of the wires and directors as in the figure, and it will be stronger in proportion as the distance of the ball G from H is augmented. This electrometer acts in the manner of the common discharging rod, and therefore has received the name of the *discharging electrometer*.

(1018.) In fig. 2. Plate CXXVIII. we have a representation of Mr LANE's electrometer applied to the machine for medical electricity. G, the lower part of which is inclosed in the pillar F, is made of wood baked and boiled in linseed oil, and bored cylindrically for two thirds of its length. The brass work is fixed to the pillar by the screw H, and is moveable in the groove I, so that it may be raised higher or lower as the height of the jar D requires. A steel screw L passes through the brass work, having its thread one sixth part of an inch distant from one another. To the end of this, and opposite to K, is fixed a hemispherical and well polished piece of brass; and a brass ball M, likewise well polished, is fixed to the prime conductor. To this screw is annexed a circular plate O, divided into 12 equal parts; and in every revolution of this screw pointing to the division of the scale N, each of which are equal to one turn of the screw. The use of this electrometer is to discharge the jar D, or any battery connected with the prime conductor, when the machine is not applied to medical purposes. If a person holds a wire fastened to the screw H in one hand, and another wire (fixed to E by a loop of brass) passing from the frame of the machine to a plate on which the jar D stands, or the hook connected with it, he will perceive no shock when K and M are in contact; and the degree of explosion, as well as the quantity of electricity accumulated in the jar, will be regulated by the distance of K and M from each other.

(1019.) In fig. 2. Plate CXXVIII. *ab* represents the discharging electrometer as applied to the conductor; *cd* the improved medical jar suspended at a small distance from it. A small glass tube is fixed in this jar, a part of the lower end of which is coated. Two wires pass through the brass ball *c* on the top of this tube; one of which is connected with the bottom of the jar, and the other goes only to the internal coating of the small tube. The wires are moveable at pleasure, and the jar is suspended from the conductor by a brass ring; and a chain or wire must be fixed to the hook *d* at the bottom.

(1020.) It is evident from merely inspecting the figure, that the arm will receive the shock by the discharge of the jar *a c d*: for, by turning the cylinder round, the jar soon becomes charged either with one or both wires in it; and directly as the charge becomes sufficiently strong to pass through the air, it will explode, and the fluid pass to the end of *b* next to it, going through the wire to the wrist, and from thence up to the other chain at the shoulder. By reversing the positions or the connections of the two wires, the progress of the shocks will be reversed, viz. from the shoulder to the

be writ. If the short wire alone be left in the *cord*, and the discharging ball of the electrometer *be* placed from a quarter of an inch to a whole one from the conductor, a most delicate small shock may be given, and repeated any number of times at pleasure. This is called the **ELECTRICAL VIBRATING SHOCK**.

(1011.) In *fig. 14, Plate CXXXIV*, *g* represents the **BOTTLE-DIRECTOR**. It is hollow, and coated like a common jar, acting as such, and in some cases is looked upon as very convenient. With this, as with the common director, it is proper to rest the ends against the part where the shock is to be applied.

(1012.) A small pocket electrical apparatus is represented on *Plate CXXXIV. fig. 15*; which may sometimes be of use for other purposes as well as medical. It is packed up in a very small size, being only 3 inches long, two broad, and one deep. It is capable of a tolerably strong charge of electricity, and will give a small shock to one, two, three, or a greater number of persons. *A* is the Leyden phial that holds the charge; *B* is the discharger to discharge the jar when required without electrifying the person that holds it; *C* is a ribbon prepared by a coating of varnish, so as to be excited, and communicate its electricity to the jar; *D* are two hare-skin rubbers, which are to be placed on the first and middle fingers of the left hand, and serve to excite the ribbon *C*.

(1013.) In order to CHARGE the JAR, place the two finger-caps, *D*, on the first and middle finger of the left hand; hold the jar, *A*, at the same time by the joining of the red and black, *E*, on the outside between the thumb and first finger of the same hand; then take the ribbon in the right hand, and readily and gently draw it upwards between the two rubbers *D*, on the two fingers, taking care at the same time the brass ball of the jar is kept early close to the ribbon while it is passing through the fingers. By repeating this operation 12 or 14 times the electrical fire will pass into the jar, which will become charged; and by placing the discharger, *C*, against it, as in the plate, a sensible spark will be seen to pass from the ball of the jar to that of the discharger. If the apparatus is dry and in good order, the crackling of the fire will be heard when the ribbon is passing through the fingers, and the jar will discharge at some distance.

LECT. III. Of the DIFFERENT METHODS of APPLYING the ELECTRICAL FLUID to the HUMAN BODY.

(1014.) It appears somewhat remarkable, that, when a small power of medical electricity is to be used, large machines should be recommended; whereas not long ago when strong shocks were administered, small machines were used. The reason is, that when shocks are given, a very small electrical machine can charge a Leyden phial much stronger than is necessary; whereas, when the stream is used, which is now found to be most efficacious in the cure of diseases, then the small machines are mostly useless. Mr Cavallo recommends Mr NAIRNE's machine (§333.) as having every necessary advantage for administering medical electricity. In general the power of the machine should be so regulated, as to apply every

degree of it, with ease and readiness; beginning with the more gentle operations, by a stream issuing from a metal point; next using a wooden point; then small sparks, stronger sparks, and lastly small shocks, in proportion to the strength and constitution of the patient, and the nature of the disease.

(1015.) The common method of electrifying a person is well known. Desire the patient to take the jar in one hand, and with the other touch the knob of it; or, if diversion is intended to accompany the medical effect, desire him to smell at the knob, *A*, in expectation of smelling the scent of a rose or a pink. This last method has occasioned it to be sometimes called the *magic smelling bottle*. But the principal methods by which electricity may be applied to the human body with a medical intention, are the following:

(1016.) I. By placing the patient in an insulated chair, and connecting him with the prime conductor. When the machine is in action, he will thus be filled with the electric fluid, which will be continually dissipated from the points and edges of his clothes; and though the effects of this are probably too slow to be rendered very advantageous, yet a sedentary person may derive some benefit from sitting in an insulated chair, having before him an insulated table, the chair to be connected with the ball of a large charged jar or battery; by which means a small quantity of the fluid will be continually passing through those innumerable capillary vessels, on the right state of which our health very much depends.

(1017.) II. By throwing the fluid upon, or extracting it from a patient, by means of a wooden point.—This may be effected in a twofold manner: 1st, By insulating the patient, and connecting him either with the cushion or the positive prime conductor, the operator presenting the point. 2d, Let the patient stand upon the ground, and the wire of the director be connected either with the positive or negative parts of the machine. The sensation produced by the fluid when acting in this manner is mild and pleasing, resembling the soft breezes of a gentle wind; generating a genial warmth, and promoting the secretion and dissipation of tumours, inflammations, &c.

(1018.) III. By the electric friction. Cover the part to be rubbed with woollen cloth or flannel. The patient may be seated in an insulated chair, and rubbed with the ball of a director that is in contact with the conductor; or he may be connected with the conductor, and rubbed with a brass ball which communicates with the ground. The friction thus produced is evidently more penetrating, more active, and more powerful, than that which is communicated by the flesh brush; and there is very little fear of being thought too sanguine. This, when used but for a few minutes, will be found more efficacious than the other after several hours application.—Electricity applies here with peculiar propriety to spasm, pleurisy, and some stages of the palsy; and in every case answers the end of blistering, where the discharge is not wanted, being the most safe and powerful stimulant we know.

(1019.) IV. By taking strong sparks from the patient. Here, as in every other case, the operator may connect the ball of the director with the positive

live or negative conductor, or he may connect the patient with either of these and the ball with the ground. Now it is clear from what has been already observed, that if the director be connected with the positive conductor, the fluid is thrown upon the patient; if with the cushion the fluid is extracted from him. Let the patient be insulated, and the action is in some measure reversed; if he is joined to the negative conductor or cushion, he will receive a spark from a person standing on the floor; but if he communicates with the positive conductor, he will give the spark to the person on the ground.

(1030.) V. By causing a current of the electric fluid to pass from one part of the body, and thus confining and concentrating its operation without communicating the shock. Place the patient in an insulated chair, and touch one part of the body with a director, joined to a positive conductor; then with a brass ball communicating with the ground touch another part; and when the machine is in action the fluid will pass through the required part from the conductor to the ball; the force of the stream will be different according to the strength of the machine, &c. Or connect one director with the cushion, and the other with the positive conductor, and apply these to the part through which the fluid is to pass, and when the machine is in action the electricity will pass from one ball to the other. It is not necessary to insulate the patient in this case.

(1031.) VI. By the ELECTRICAL SHOCK. The shock may be given to any part of the human body, by introducing that part of the body into the circuit which is made between the outside and inside of the bottle. This is conveniently effected, by connecting one director by a piece of wire with the electrometer, and the other with the outside of the bottle; then hold the directors by their glass handles, and apply the balls of them to the extremity of the parts through which the shocks are to be passed. The force of the shock is augmented or diminished by increasing or lessening the distance between the two balls, which must be regulated by the operator to the strength and sensibility of the patient. Instead of the common bottle, we may have a small one with a glass tube proceeding from it, through which proceeds a wire and hook to hang it upon the machine, with a longer one from the outside coating, and which is to be carried by means of a director to the patient. When this is used as a common bottle, both wires are to be left there, and the shock is communicated by two directors, one connected with the bottom, the other with the top. The operator will often find himself embarrassed in giving small shocks, the fluid passing from the conductor to the ball of the electrometer, instead of going through the circuits he desires: when this happens, which may be known by the chattering noise of the sparks, the resistance formed to the discharge is so great, that the fluid cannot force its way through the circuit: to remedy this, pass two metallic pins through the cloathing, so that they may be in contact with the skin, which will lessen the resistance and conduct the fluid.

(1032.) VII. By a sensation between a shock

and the spark, which does not communicate that disagreeable feeling attending the common shock. This is effected by taking out the long wire from the small medical bottle, and leaving the shorter one which is connected with the tube in its place, the directors to be connected and used as before. The effect of this species of shock, if it may be called one, is to produce a great vibration in the muscular fibres, without inducing that pungent sensation which the shock effects. It is therefore applicable to some stages of palsy and rheumatism; it may also serve as an artificial means of exercise.

(1033.) VIII. By the BOTTLE DIRECTOR. Insulate the patient, and place the ball *g*, *Pl. CXXXII. fig. 14.* in contact with him; by which means the director is charged. If a wire is conveyed from the bottom of this to the top of another director, the bottle director will be discharged whenever the other ball *b* is brought in contact with the patient; so that by bringing it down with rapidity any number of small shocks may be procured in a minute: or connect the insulated patient with the top or inside of a large charged jar, and use this apparatus used in the foregoing manner to discharge from the large jar at each spark its contents, and by repetition it will discharge the whole jar: thus a number of shocks may be given without continually turning the machine or employing an assistant.

(1034.) IX. By passing the whole fluid contained in the Leyden phial through a diseased part without giving the shock. Connect a director by means of a wire, with the ball of a Leyden jar charge the jar either completely or partially, and then apply the ball or point of the conductor to the part intended to be electrified, and the fluid which was condensed in the phial will be thrown on the part in a dense slow stream, attended with a pungent sensation which produces a considerable degree of warmth. If a wire that communicates with the ground is placed opposite to the end of the director, the passage of the fluid will be rendered more rapid, and the sensation stronger. To insulate the patient, connect him with the top of a jar, charge this, and then apply a metal wire or piece of wood to the part through which you wish to make the fluid pass. It is obvious, that in this case the circuit between the inside and the outside of the jar is not completed, therefore the shock will not be felt. The condensed fluid passes in a dense slow stream through the required part, while the outside acquires a sufficient quantity from substances near it to restore the equilibrium.

SECT. IV. GENERAL RULES for the ADMINISTRATION of MEDICAL ELECTRICITY.

(1035.) It is impossible to prescribe the exact degree of electrization requisite for various diseases. Persons of different constitutions, though afflicted with the same disease, often require different degrees of electrification. Some persons are so delicate that the smallest sparks give them as much pain as shocks do others; while other persons can suffer pretty severe shocks without pain; and Mr Cavallo says, he "has heard of persons who

who were insensible of any electric power, even of considerably strong shocks;" but this is hardly credible.

(1036.) The following general rules for practice are laid down by that learned electrician.

(1037.) "I. It should be attentively observed, to employ the smallest force of electricity that is sufficient to remove or alleviate any disorder. Thus the shocks should never be used, when the cure may be effected by sparks; the sparks should be avoided, when the required effect can be obtained by only drawing the fluid with a wooden point; and when this last treatment ought to be omitted, when the fluid drawn by a metal point may be thought sufficient. The difficulty consists in distinguishing the proper strength of electric power that is required for a given disorder, the sex and constitution of the patient being considered.—The surest mode is to begin by the most gentle treatment, then this has been found ineffectual for a few days, which is denoted by the disease not abating, and the application of electricity not causing any benefit, then the operator may gradually increase the force of electricity till he finds the proper degree of it.

(1038.) "II. In judging of cases proper to be electrified, experience shows, that in general all kinds of obstructions, whether of motion, of circulation, or of secretion, are very often removed, or alleviated by electricity. The same may also be said of nervous disorders; both which include a great variety of diseases. The application of electricity has seldom entirely cured diseases of a long standing, although it generally relieves them. In persons afflicted with the venereal disease or pregnant women, electrization has been thought to be pernicious; but even in those cases it may be used without fear, if judiciously managed. When pregnant women are to be electrified, the shocks should be forbidden; and even when the more gentle treatments are used, a constant caution should be given to any phenomenon that may appear in the course of the electrization; the method of which should be increased, diminished, or suspended, as circumstances may indicate.

(1039.) "III. In cases of gathering tumours, the best method is to draw the fluid by means of a wooden point; or, if that prove painful, by a metal point. Sparks in these cases, and also shocks, are often hurtful. In stiffnesses, paralytica, and rheumatism, small sparks, especially through a double flannel, and also very small shocks (at most one tenth of an inch) may be used. Stronger shocks may be sometimes, though seldom, administered for a violent to the ach, and for some internal spasm of no long standing.

(1040.) "IV. When any limb of the body is deprived of motion, it must be observed, that the privation of motion is not always occasioned by a contraction of the muscles; but that it is often the effect of relaxation. Thus for instance, if the limb is bent inwardly, and the patient has no power of straightening it, the cause of it may be weakness of the outward muscles, as well as a contraction of the inward ones. In such cases, as it is often difficult, even for good anatomists to discover the real cause, the surest method is to electrify not only those muscles, which are suppo-

sed to be contracted, but also their antagonists; for to electrify a sound muscle is by no means hurtful.

(1041.) "V. When the stream of electric fluid is thrown either with a wooden or metal point, the length of the operation should be from 3 to 10 minutes, more or less, according as occasion may require. When shocks are administered, their greatest number should not exceed a dozen or 14, except when they are to be given to the whole body in different directions. The number of sparks, when they are used, may generally exceed the number of shocks mentioned above.

(1042.) "VI. Lastly, when children must be electrified upon the insulating chair, as it is difficult to let them remain quiet, the most convenient method is, to let another person sit in the insulating chair, and hold the child while the operator is electrifying him."

(1043.) On the whole, the electric fluid, issuing from a wooden point (which should not be split, or too short,) has a power intermediate between that of the stream proceeding from a metal point, and that of the spark; and is therefore in general the most proper and effectual method of electrification. It consists of a vast number of exceedingly small sparks, accompanied with a little wind, which gently stimulates the part affected, and gives a degree of warmth very agreeable to the patient. Even this gentle method of electrifying, however, is sometimes too strong when applied to open sores upon delicate parts. In such cases therefore, the metal point must be used instead of the wooden, and the director must be kept at a greater distance, than when the wooden piece was upon it. The electric fluid issuing out of this pointed wire of the director, occasions only a very gentle wind upon the part to which it is directed, which proves agreeable even to persons of the utmost delicacy.

(1044.) Mr CAVALLLO says, "it might naturally be suspected, that so gentle and nearly insensible a treatment could hardly be of any efficacy; but my reader may be assured, that, to my certain knowledge, deduced from the practice of persons who have had long experience in this subject, this method of electrization, viz. the throwing the fluid with a metal point, has often mitigated pains, and cured obstinate and dangerous diseases, which could not be removed by any other remedy that was tried."

(1045.) "The stream, (he adds,) issuing both out of the wooden and of the metal points acts even through the cloaths, if they are not too thick: Hence it may be used without incommodeing the patient; but when it is convenient to uncover the part which is to be electrified, it is much preferable to direct the fluid immediately upon the skin."

SECT. V. Of the ADMINISTRATION of MEDICAL ELECTRICITY in PARTICULAR DISEASES.

(1046.) Although it belongs properly to the article MEDICINE, to treat of the cure of diseases by electricity, as well as by other means, yet there would be a manifest defect in this branch of our subject, were we not to mention the particular method of applying the electric fluid in several of the most common diseases, in which medical electricity has been found efficacious.

(1047.) "RHEU-

(1047.) "RHEUMATIC disorders even of long standing," says Mr Cavallo, "are relieved, and generally quite cured by only drawing the electric fluid with a wooden point from the part, or by drawing sparks through flannel. The operation should be continued for 4 or 5 minutes, repeating it once or twice every day.

(1048.) "DEAFNESS, except when occasioned by obliteration, or other improper configuration of the parts, is either intirely or partly cured by drawing the sparks from the ear with the glass tube director, or by drawing the fluid with a wooden point. Sometimes it is not improper to send exceedingly small shocks from one ear to the other. Whenever the ear is electrified, the discharge of the wax is considerably promoted.

(1049.) "THE TOOTH-ACH, occasioned by cold, rheumatism, or inflammation, is generally relieved by drawing the electric fluid with a point, immediately from the part, and also externally from the face. But when the body of the tooth is affected, electrization is of no use.

(1050.) "SWELLINGS, in general, which do not contain any matter, are mostly cured by drawing the electric fluid with a wooden point. In some cases of WHITE SWELLINGS, quite cured by electricity, even the bones and cartilages were disfigured. The operation should be continued for 3 or 4 minutes every day.

(1051.) "INFLAMMATIONS of every sort are generally relieved by a very gentle electrization.

(1052.) "IN INFLAMMATIONS OF THE EYES, the throwing of the electric fluid by a wooden point is constantly attended with great benefit; the pain being quickly abated and the inflammation generally dissipated in a few days. In these cases, the eye of the patient must be kept open, and care taken not to bring the point very near it. Sometimes it is sufficient to throw the fluid with a metal point; for in these cases too great an irritation should be avoided. After throwing the fluid for about half a minute, a short time may be allowed to the patient to rest, and to wipe his tears: then the operation may be continued for another half minute, and so on for 4 or 5 times every day.

(1053.) "THE GUTTA SERENA has been sometimes cured by electrization; but electricity has proved ineffectual in many such cases. The best method of administering electricity in such cases, is first to draw the fluid with a wooden point for a short time, and then to send about half a dozen shocks of one 20th of an inch, from the back and lower part of the head to the forehead, very little above the eye.

(1054.) "All the cases of FISTULA LACHRYMALIS, as far as I am informed, that have been electrified by persons of ability for a sufficient time, have been entirely cured. The method generally practised has been that of drawing the fluid with a wooden point; and to take very small sparks from the part. The operation may be continued for about 3 or 4 minutes every day.

(1055.) "PALSIAS are seldom effectually cured by electricity, but are generally relieved to a certain degree. The method is to draw the fluid with a wooden point, and to draw sparks

through flannel, or through the usual coverings, if not too thick, for about 5 minutes per day.

(1056.) "ULCERS or open sores of every kind, even of long standing, are generally disposed to heal by electrization. The general effects are a diminution of the inflammation; and a discharge of matter, which gradually lessens till the sore is quite cured. The gentlest electrization must be used. To draw or throw the fluid with a wooden or metal point, for 3 or 4 minutes per day, is quite sufficient.

(1057.) "CUTANEOUS ERUPTIONS have been successfully treated with electrization, but if the wooden point is kept too near the skin, so as to cause any considerable irritation, the eruption sometimes spread more: but if kept at about inches distance, the eruptions will be gradually diminished till they are quite cured. A warning about the electrified part is a sign that the electrization is rightly administered.

(1058.) "The application of electricity has perfectly cured various cases of ST VIRUS'S DANCE, or of that disease commonly called so. Shocks about one 10th of an inch may be sent through the body in various directions, and sparks may be taken.

(1059.) "SCROPHULOUS TUMOURS, when beginning, are generally cured by drawing the electric fluid with a wooden or metal point from the part.

(1060.) "IN CANCERS, the pains only are mostly alleviated by drawing the electric fluid with wooden or metal point. I know of one case only in which a most confirmed cancer of very long standing, on the breast of a lady, has been much reduced in size. This patient was so far relieved by drawing the fluid with a metal point from the part, that the excruciating pains she had suffered for many years, did almost entirely disappear. When the electric fluid was drawn by a wooden point, the pains rather increased. This patient when I heard of her last, was still under electricity, and the cancer seemed not unlikely to be perfectly cured, contrary to the expectations even of the judicious physician who electrified her.

(1061.) "ABSCESSES, when beginning, and where there is any tendency to form matter, electrization disperies. Lately, in a case in which matter was formed upon the hip, called the lumbar abscess, the disease was perfectly cured by electricity. The sciatica has also been often cured by it. In such cases the electric fluid must be sent through the part, by means of two directors applied to opposite parts, and in immediate contact either with the skin, or with the coverings, when very thin.

(1062.) "IN CASES OF PULMONARY INFLAMMATIONS, when beginning, electrization has sometimes been beneficial; but in confirmed diseases of the lungs, I do not know that it ever afforded any unquestionable benefit.

(1063.) "NERVOUS HEAD-ACHS, even of long standing, are generally cured by electrization. The electric fluid must be thrown with a wooden point, and sometimes even with a metal point, all round the head successively. Shocks can seldom be used, because the nerves of persons subject to this disease are so very irritable, that the shocks, the sparks, &c. throw them into convulsions.

(1064.) "The

(1064.) "The application of electricity has often been found beneficial in the DROPSY when just beginning, but it has never been of any use in advanced dropsies. The electric fluid is sent through the part in various directions; and sparks are drawn across the flannel, or cloaths, for at least ten minutes. Perhaps a simple electrization, (viz. to insulate the patient, and connect him with the prime conductor, while the machine is in action,) continued for an hour or two, would be more beneficial.

(1065.) "The GOUT has been cured by electricity in various instances. The pain has been generally mitigated, and sometimes the disease has been removed so effectually as not to return. In some cases the electric fluid has been thrown by a wooden point, though sometimes, when the pain was too great, a metal point only was used.

(1066.) "AGUES very seldom fail of being cured by electricity, so that sometimes one electrization or two have been sufficient. The most effectual method is drawing sparks through flannel or the cloaths for about 10 minutes, either at the time the fit, or a short while before it is expected.

(1067.) "The SUPPRESSION of the ORDINARY MENSTRUAL FLUXES of women has often been cured by electricity, even when the disease has been of long standing, and after the most powerful medicines have proved ineffectual.—Small shocks of one sixth of an inch may be sent through the cervix; sparks may be taken through the cloaths from the parts adjacent to the seat of the disease; and the electric fluid may be transmitted by applying the metallic or wooden extremities of two conductors to the hips, in contact with the cloaths. The number of shocks may be about 12 or 14. The other applications may be continued for 3 or 4 minutes, repeating the operation every day. But strong shocks should be avoided.

(1068.) "In respect to UNNATURAL DISCHARGES, (as the *fistula lachrymalis*, &c.) and FLUXES, (general, (or increased natural discharges,)) the power of electricity has been found more beneficial for the first than for the second sort, which is mostly increased by it.

(1069.) "In the VENEREAL DISEASE electrization has been generally forbidden; having mostly increased the pains rather than diminished them. Indeed, it is no wonder that electricity has produced some bad effects, especially in the manner it was administered some time ago, viz. by giving strong shocks. However it has been lately observed, that a very gentle application of electricity, as drawing the fluid by a wooden or metal point, is peculiarly beneficial in various cases of its kind, even when the disease has been of long standing."

SECT. VI. EXTRAORDINARY CURES performed by ELECTRIZATION.

(1070.) We shall conclude our account of MEDICAL ELECTRICITY, with a few additional extracts from Mr Cavallo's Treatise, exhibiting several authentic anecdotes of physical cases, wherein extraordinary cures were performed by electrization. These we shall state in as few words as possible, referring the reader to Mr Cavallo's work for the particulars at large.

VOL. VIII. PART I.

(1071.) I. DANIEL WYSCOMB, aged 36, of a robust constitution, was sent by Mr FORD, surgeon, to the Westminster Dispensary, to Mr PARTINGTON, to be electrified for a violent inflammation in both his eyes. His eye-lids could not be opened without the help of the fingers, and when opened the coats of the eye appeared of an uniform red colour. The sight of the right eye was so much impaired, that he could not distinguish any object with it, and even when turned towards a window, with the eye-lids forced open, he could only perceive a red glare of light like a ball of fire; but the rest of the room seemed totally dark. With the left he could distinguish the colours and shapes of objects, but was commonly mistaken in their sizes. All these symptoms were accompanied with the most excruciating pains, shifting from one part to another, but chiefly affecting his temples, and sometimes darting to the back part of his head, or the centre of his eyes. He had been two months under the care of Mr FORD, but his disorder resisted all the usual remedies. Mr Partington began to electrify him on the 21st Oct. 1776, and 3 days after, the inflammation began to abate. In a fortnight it was quite gone; but the pupil of the eye was still so nearly closed, as to be scarcely visible. He continued to be electrified daily for 5 weeks, when the pupil gradually dilated, till he was able to distinguish objects on the other side of the way. The pains having now entirely left him he omitted the use of electricity, and experienced no farther inconvenience after it. This remarkable cure was effected by throwing the stream of the electric fluid with a wooden point fixed upon a pointed brass wire, which was an invention of Mr PARTINGTON's; and this was the first case in which a wooden point was used.

(1072.) II. An opacity of the vitreous humour of the eye was also cured by electrization. "This seems," says Mr Cavallo, to be the only case of the kind to which electricity was applied."

(1073.) III. Mr LOVETT, in his *Electricity rendered useful*, mentions a cure he performed, in a case of the ST ANTHONY'S FIRE; wherein the inflammation was so great, that at first sight he almost despaired of success. About the middle of the day he made the first trial; before night the swelling was much abated; and in a few days quite cured. The operation was simply drawing sparks with a finger, or an iron style, while the patient was electrified on an insulating stool.

(1074.) IV. Mr LOVETT also relates a cure of a fistula near the inner corner of the eye, which, before the application of electricity, had broken out and healed 7 times. The 8th time, the swelling was as big as a filbert. It quickly decreased after being electrified, and the disorder had not returned for above two years, when Mr Lovett wrote the case. The method was simply drawing sparks from the part.

(1075.) V. The late Mr FERGUSON, being at Bristol, was seized with a violent fore throat, so that he could not swallow any thing. Electrization was performed by Mr ADLAM, by drawing sparks from his throat. This was repeated half an hour after; and within an hour Mr Ferguson could both eat and drink without pain.

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(1076.) VI.

(1076.) VI. Mr JOHN BIRCH, surgeon, relates the two following cases. A young woman, aged 22, was afflicted with a tumor on her thigh, a suppression of the menses, and many other complicated symptoms. For 3 days he passed some electric shocks through the region of the pelvis; on the 4th she was attacked with a violent pain in her side, which left her on applying the shocks to that part. It returned in 3 hours; the shocks were repeated, and it again vanished, but returned in 6 hours, when it was once more removed by a stronger shock. Next day the menses appeared and flowed gently for 3 days; but on their ceasing, the pain returned with great violence. The shock was again applied; the pain ceased; the menses returned for two days, and by continuing the electrization for several weeks all her complaints were cured.

(1077.) VII. A lady had been afflicted with painful ulcers on both legs for 15 months. They had come on after an in-lying, and the legs were swelled. Her menses had been irregular for above 20 months. The pain she suffered was, at the regular periods, alleviated by a bloody discharge from the ulcers. Upon being electrified the menses returned and continued for a week. The ulcers were healed within 3 weeks after.

(1078.) VIII. A very extraordinary case of muscular contraction cured by electricity is inserted in the 68th vol. of the *Philos. Transf.* It is narrated in a letter from Mr W. HENLY, F. R. S. containing a copy of another from Mr Miles Partington; the cure having been begun by the latter, and completed by the former of these gentlemen. The patient's "head was drawn down over her right shoulder; the back part of it was twisted so far round, that her face turned obliquely towards the opposite side, by which deformity she was disabled from seeing her feet, or the steps, as she came down stairs. The *Sterno-mastoideus* muscle was in a state of contraction and rigidity. Owing to the extreme tension of the teguments of the left side, she had a pain continually, and often very violent in sudden changes of weather. Her pulse was weak, quick, and irregular. She was subject to great irritability; had frequently a little fever; her spirits were exceedingly oppressed, and at times she was highly paralytic. Her disorder had originated above two years before, when she was suddenly seized, going out of a warm room into the cold air, with a pain in the back of her head, which continued with little abatement, contracting gradually the muscles to the deformity above described. She was electrified by Mr PARTINGTON for the first time, Feb. 18th, 1777. He placed her in an insulated chair, and drew strong sparks from the parts affected, for four minutes, which brought on a profuse perspiration, that relaxed the *mastoideus* muscle considerably. The next electrization was performed on the 24th by dropping for five minutes, by a large discharging rod, very strong sparks upon the *mastoideus* muscle, from its double origin at the *sternum* and *clavicula* to its insertion at the back of the head. She had now more freedom in moving her head. She was electrified in the same manner on the 17th Feb. and the 3d, 5th, 6th, 7th, and 9th March, when the fever and irritability went off entirely.

The weather being now unfavourable for the lady waiting on Mr Partington, he requested Mr Henly, who lived next door to her, to electrify her every evening. This he did by placing her on a stool with glass legs, and drawing strong sparks for ten minutes from the muscles on both sides of her neck, and by giving her two shocks from a bottle containing 15 square inches of coated surface fully charged, through her neck and one of her arms, crossing the neck in different directions. Within a fortnight the lady was completely cured.

(1079.) IX. A cure no less extraordinary of the St Vitus's dance is related in the 69th vol. of the *Phil. Transf.* in a letter from Dr ANTHONY FOTHERGILL, F. R. S. at Northampton, to W. HENLY, F. R. S. dated 28th Oct. 1778. Ann Agutter, a girl of ten years of age, of a pale emaciated habit, was admitted into Northampton hospital, on the 6th June 1778. She was speechless, and with difficulty supported from falling by two assistants. She had for six weeks laboured under violent convulsions, with very short intermissions, and her memory and intellects were impaired. All the usual remedies having been applied in vain, Dr Fothergill advised electricity, and recommended her to the care of the rev. Mr UNDERWOOD, who completely cured her before the 1st of August. He placed her on the glass-footstool from half an hour to an hour at a time; drew sparks from her arms, neck and head, which occasioned a perspiration and a rash in her forehead, and sent shocks through her hands, arms, breast and back. On the 13th July he sent four strong shocks through her jaws, soon after which her speech returned. Mr Underwood mentions in his letter to Dr Fothergill, that "every time she was electrified her pulse quickened to a great degree, which sufficiently refutes the idea entertained by some electricians, that the electric fluid has no effect upon the pulse.

(1080.) X. Dr FOTHERGILL mentions also, that he himself cured a boy who had long had the same disease, though in a much less degree, by electricity: and that Dr Watson had successfully treated a violent convulsive disease similar to the above but without the *apponia*.

(1081.) XI. A girl about 7 years of age, belonging to the Foundling hospital, being troubled with worms, was at last, by an universal rigidity of the muscles, reduced to such a state, that her body seemed rather dead than alive. Other medicines being tried in vain, she was at last electrified intermittently for two months, under the direction of Sir WILLIAM WATSON, F. R. S. and restored to her former state of health.

(1082.) XII. Mr PARTINGTON, in a letter to Mr CAVALLO, dated 10th Aug. 1781, after describing a desperate case of a fistula lachrymalis, which he had cured by passing gentle electric shocks down the duct of the nose, mentions a remarkable effect of electricity in removing colic-tiveness. He observes, at the same time, "that it does by no means increase the evacuations of ordinary good habits of body, but only re-insures the usual discharge in cases of colic-tiveness. This effect (he adds) seems to take place, because the electrization gives vigour and energy to the fibres of the debilitated intestines, in the same manner

as it restores the lost motion of more external muscles."

(1083.) XIII. We shall conclude this most important branch of our subject, with an account of an extraordinary cure, performed by electricity under every disadvantage of climate and weather, and related by Dr JAMES LIND in a letter to Mr Cavallo, dated 17th June, 1784. The wife of an officer of artillery at Bombay, during the last months of her pregnancy, had gradually lost the use of her lower limbs, by the pressure of the fetus upon the nerves which go to these extremities. She was safely delivered, but, though she soon recovered in every other respect, the paralysis of her limbs remained, and baffled every attempt to remove it by the ordinary remedies. She had continued 7 months in this state, when Dr LIND first visited her, in June 1780, and recommended electricity. But the difficulty was to create an electrical machine in an atmosphere so extremely moist as that of Bombay then was, the dry season having set in. This difficulty, however, was got over by placing the machine in a small studded room, heated by burning charcoal. The patient was then electrified, first by giving sparks to her feet and thighs, and afterwards by passing 20 very small shocks up one leg and down the other.—The effect," says the doctor, "was really surprising, for after the first electrization, she was so relieved, as to be able to walk up some steps without any help, which she had not been able to do for many months before. By the 2d she was enabled to walk out, and visit several of her friends. The 3d day's electrization completed the cure, and she went about with all the ease and activity in the world. I afterwards received a letter from her husband, dated May 29th 1781, informing me of her continuing in perfect health."

(1084.) From such extraordinary and well attested cures, in such a variety of diseases, and in so many desperate cases, it would appear, that the electric fluid, if not a PANACEA, or universal remedy, at least approaches nearer to that character, than any medicine hitherto discovered.

PART V.

ANIMAL ELECTRICITY.

SECT. I. DEFINITION and DISCOVERY of ANIMAL ELECTRICITY.

(1085.) We now proceed, according to our plan, to give a brief account of the last discovered, and not the least important, branch of our subject, called ANIMAL ELECTRICITY.

(1086.) Previous to 1791, when Dr GALVANI of Bologna first announced his discoveries to the public, the term ANIMAL ELECTRICITY was restricted to the surprising electrical properties of three fishes, which were found to possess the singular power of giving shocks to those who touched them, analogous to those of the Leyden phial, and which will be particularly described in next section.

(1087.) This term is now used in a much more extensive sense, and may be defined, in the words of Mr Cavallo, that "property of organized animal matter, of being put in motion by a metallic

or other communication made between the nerves and the muscles," which "is not peculiar to a few animals only, but seems to be a property of all animals in general; a law of nature, which admits of few exceptions, and even those exceptions of a very doubtful nature."

(1088.) "The subject of MUSCULAR MOTION," says this eminent electrician, "which has exercised the genius of philosophers from time immemorial, is one of those arcana of nature, that have hitherto eluded the investigation of human industry. Innumerable experiments have been made in vain, and the labours of one man have hardly ever produced any thing, more than the refutation of another man's hypothesis."

(1089.) "This labyrinth of obscurity has at last received a ray of light from the recent discoveries of Dr GALVANI of Bologna. A new way has been opened to promising experimental investigation, and many ingenious persons are now pursuing the tract with care and assiduity."

(1090.) "The original discoveries were announced to the world in a 4to book, consisting of 58 pages, with four large plates, and entitled *Alessandro Galvani de Viribus Electricitatis, in motu musculari, Commentarius*.—Abstracts of this work were soon after inserted in various periodical publications; and these have been followed by farther discoveries made by other ingenious persons, and especially by professor VOLTA, Dr EUSEBIUS VALLI, Dr MONRO, and Dr FOWLER. The scattered materials are numerous for want of a theory; but neither can a theory be formed nor even farther investigation be instituted, without a comprehensive view of all that has been done concerning the present experiments."

(1091.) Mr CAVALLO himself has also made several experiments on this interesting subject, mostly in conjunction with Dr LIND, F. R. S. which he has collected and methodized in the 3d vol. of his treatise, along with the facts that have appeared in print, and these communicated by letters or otherwise.

(1092.) Dr GALVANI's discoveries were made chiefly with dead frogs. He discovered, 1st, That a frog dead and skinned is capable of having its muscles put in action either by atmospherical or artificial electricity: and 2dly, That, independent of any electricity, the same motions may be produced in the dead animal, or even in a detached limb, by merely making a communication between the nerves and the muscles, with substances that are conductors of electricity. If the circuit be made by non-conductors, no motion will take place. From these facts and circumstances, the title of *animal electricity* has been given to this wonderful property of organized animal matter, which is found in many other animals besides frogs.

SECT. II. Of ANIMALS ENDUED with UNCOMMON ELECTRICAL PROPERTIES.

(1093.) Not long after the discovery of the electrical shock, and the method of augmenting the power of electricity, it naturally became an object with electricians to investigate the effects of it upon animal bodies. These were quickly found to be entirely similar to such as are produced upon any other conducting substance, viz. an emiss-

tion of sparks, attraction, and repulsion, &c. By degrees it was found, that very strong signs of electricity were exhibited by some animals, even without the application of any artificial apparatus. The experiment of producing sparks by stroking the back of a cat in frosty weather, readily showed that the electric fluid may exist in a very active state in the body of an animal, without injuring any of its functions. Mr Cavallo says, he has "often observed, that, when stroking a cat with one hand, and holding it with the other, he feels frequent smart prickings on different parts of that hand, which holds the animal. In these circumstances very pungent sparks may be drawn from the tips of the ears of the cat." He also mentions, that "by using a metal button fastened with a stick of sealing wax, he can obtain such strong sparks from the back of a cat, a hare's skin, a rabbit's skin, &c. that he can presently charge a coated phial with either of these, and so strongly as to pierce a hole through a card with its discharge."

(1094.) From animals of the inferior kind a transition was made to the human species; and signs of electricity were discovered in them where it had not been suspected before. Some persons have been remarkable for an extreme lustre of their eyes; and others have been so much electrified naturally, as to give evident signs of it when a sensible electrometer had been applied to them. Others have manifested an extreme sensibility of even the smallest degrees of electricity, inasmuch that they would be affected by a flash of lightning, though so remote that the thunder could not be heard. All this showed that the subtle fluid we treat of bears a very active part in the animal economy, and led to more important researches on the subject. One of the first discoveries was, that some creatures are so strongly electrified naturally as to have it in their power to give a strong shock at pleasure, capable of destroying any small animal that comes near them. Of these, however, only 4, and those of the aquatic kind, have yet been observed, viz. the *gymnotus electricus*, the *torpedo*, the *silurus electricus*, and a fish found on the coast of the Comoro Islands.

(1095.) I. The *GYMNOTUS* has the astonishing property of giving the electric shock to any person, or number of persons, either by the immediate touch with the hand; or by the mediation of any metallic conductor; and a person who kept some of them told Dr GARDEN, that they had this property much stronger when first caught than afterwards.

(1096.) "The person (says he) who is to receive the shock, must take the fish with both hands, at some considerable distance asunder, so as to form the communication, otherwise he will not receive it, at least I never saw any one shocked from taking hold of it with one hand only; though some have assured me, that they were shocked by laying one hand on it. I myself have taken hold of the largest with one hand often without ever receiving a shock; but I never touched it with both hands, at a little distance asunder, without feeling a smart shock. I have often remarked, that when it is taken hold of with one hand, and the other is put into the water over its body without touch-

ing it, the person received a smart shock; and I have observed the same effect follow when a number joined hands, the person at one extremity of the circle taking hold of or touching the fish, and the person at the other extremity putting his hand into the water over the body of the fish. The shock was communicated through the whole circle as smartly as if both the extreme persons had touched the fish. In this it seems to differ widely from the torpedo, or else we are much misinformed of the manner in which the benumbing effect of that fish is communicated. The shock which the *gymnotus* gives seems to be wholly electrical; and all the phenomena or properties of it exactly resemble those of the electric *aura* of our atmosphere when collected, as far as they are discoverable from the several trials made on this fish. This stroke is communicated by the same conductor, and intercepted by the interposition of the same original electrica, or electricities *per se* as they used to be called. The keeper of this fish informs me, that he caught them in Surinam river, a great way up, beyond where the salt-water reaches; and that they are a fresh-water fish only. He says, that they are eaten, and by some people esteemed a great delicacy. They live on fish, worms, or any animal food, if it is cut small so that they can swallow it. When small fishes are thrown into the water, they first give them a shock, which kills or stupifies them, that they can swallow them easily and without any trouble. If one of these small fishes, after it is shocked, and to all appearance dead, be taken out of the vessel where the electrical fish is, and put into fresh water, it will soon revive again. If a larger fish than they can swallow be thrown into the water, at a time that they are hungry, they give him some smart shocks till he is apparently dead, and then they try to swallow or suck him in; but, after several attempts, finding he is too large, they quit him. Upon the most careful inspection of such fish, I could never see any mark of teeth, or the least wound or scratch on them. When the electrical fish are hungry, they are pretty keen after their food; but they are soon satisfied, not being able to contain much at one time. An electrical fish of three feet and upwards in length cannot swallow a small fish above 3 or at most 3 inches and a half long. I am told, that some of these have been seen in Surinam river upwards of 22 feet long, whose stroke or shock proved instant death to any person that unluckily received it."

(1097.) Several other accounts of this fish have been published by different persons, but none of them so full and distinct as the above. They all agree that its electric virtue is very strong. Mr FERMIN, in his natural history of Surinam, published, in 1765, tells us, that one cannot touch it with the hands, or even with a stick, without feeling a horrible numbness in the arms up to the shoulders; and he further relates, that, making 14 persons grasp each other by the hands, while he grasped the hand of the last with one of his, and with the other touched the eel with a stick, the whole number felt so violent a shock, that he could not prevail on them to repeat the experiment.

(1098.) Mr V. VANDERLOTT, in two letters from Rio

the *Espequeo*, dated in 1761, makes two species, the black and the reddish; though he acknowledges, that, excepting the difference of colour and degree of strength, they are not materially different. In most experiments with these animals, he remarked a surprising resemblance between them and an electrical apparatus; nay, he observed, that the shock could be given to the finger of a person held at some distance from the bubble of air formed by the fish when he came to the surface of the water to breathe; and he concluded, that at such times the electrical matter was disengaged from his lungs. He mentions another characterizing circumstance, which is, that torpedoes in general were conductors of its electric property, yet some were found to be sensibly better than others for that purpose. Of this property Dr Priestley takes notice, and says, that a lightning rod is preferable to any thing else. The same is likewise observed by Linnæus. Dr Priestley adds, that the sensation is strongest when the fish is in motion, and is transmitted to a great distance; so that if persons in a ship happen to touch their fingers or feet in the sea, when the fish is swimming at the distance of 15 feet from them, they are affected by it. He also tells us, that the *torpedo* itself, notwithstanding all its electric powers, is killed by the lobster.

(1109.) II. The astonishing property of the *Torpedo* in giving a violent shock to the person who touches it in his hands, or who treads upon it, was long an object of wonder. For some time it was generally reckoned to be entirely fabulous; but at last the matter of fact being ascertained beyond doubt, philosophers endeavoured to find out its cause. M. REAUMUR accounted for it by the action of a vast number of minute muscles, each by their accumulated force gave a sudden violent stroke to the person who touched it. Solutions of this kind were quite unsatisfactory, and the stroke was found to be communicated through water, iron, wood, &c.

(1100.) When the phenomena of electricity began to be better known, it was then suspected, that the shock of the torpedo was occasioned by a certain action of the electric fluid; but as not the spark of fire, or noise could ever be perceived, it too seemed insufficient. Of late, however, WALSH has, with indefatigable pains, not only explained this surprising phenomenon on the own principles of electricity, but given a demonstration of his being in the right, by constructing an artificial torpedo, by which a shock resembling that of the natural one can be given. The fine organs of the torpedo consist of two sets of very small cylinders lying under the skin, one of which is electrified positively and the other negatively, seemingly at the pleasure of the fish. When a communication is made between the set of cylinders positively electrified and those which are negatively so, a discharge and shock ensue, the same as what happens in the case of the Leyden phial. (1101.) The only difficulty now is to account for the total absence of a spark (which in the case of the torpedo never exists even in the smallest degree), and the impossibility of conducting the shock through the smallest interval of air. But

this also is explained in a satisfactory manner by Mr Walsh, and shown to be nothing else than what every day takes place in our electrical experiments. It is well known, that a small charge of electricity, if put into a little phial, will occasion a bright spark and loud noise when discharged; but if the same charge is put into a phial much larger, the spark and noise will be less in proportion; neither will the spark break through near such a space of air in the latter case as in the former; though the shock would in both cases be the same to a person who received it through his body. If, instead of a large phial, we suppose the charge to be diffused all over a large battery, the shock would still be the same, and yet the spark and noise attending it would be almost imperceptible. The case is just the same with the torpedo. Each of the electric organs is a battery composed of innumerable small cylinders, which discharging themselves all at once produce a formidable shock; but by reason of the smallness of the charge of each, the spark is imperceptible, and cannot break through the least space of air.

(1102.) The truth of this was exemplified by Mr Walsh's artificial torpedo, which though it would give a very considerable shock through a conductor totally uninterrupted, yet on the least breach therein, even for the breadth of a hair, no shock was felt. In every other respect the electricity of the torpedo agrees with that exhibited by the common electrical machines. An insulated person cannot receive a shock by touching one of the electric organs of the fish; but a violent stroke is given to the person, whether insulated or not, who lays one hand on the positive and the other on the negative organ. The fish, as is reasonable to imagine, seems to have this electric property in its own power; and appears sensible of its giving the shock, which is accompanied by a kind of winking of his eyes. See RAJA.

(1103.) The ancients considered the shocks given by the torpedo as capable of curing various disorders; and a modern philosopher will scarcely hesitate to believe their assertions, now that electricity has been found to be a remedy for many diseases.

(1104.) III. The 3d. fish, which is known to have the power of giving the shock, is found in the rivers of Africa, but we have a very imperfect account of its properties. Messrs Adanson and Forskal make a short mention of it, and M. Broussonet describes it under the French name of *le Trembleur* in the *Hist. de l'Academie Royale des Sciences* for the year 1782. This animal belongs to the order, called in Willoughby's system *silurus*; hence it is commonly called *SILURUS ELECTRICUS*. Some of these fishes have been seen even above 20 inches long. The body of the *silurus electricus* is oblong, smooth, and without scales; being rather large, and flattened towards its anterior part. The eyes are of a middle size, and are covered by the skin which envelopes the whole head. Each jaw is armed with a great number of small teeth. About the mouth it has six filamentous appendices, viz. four from the under lip and two from the upper; the two external ones, or farthest from the mouth on the upper lip, are the longest. The colour

lour of the body is greyish, and towards the tail it has some blackish spots. The electric organ seems to be towards the tail, where the skin is thicker than on the rest of the body; and a whitish fibrous substance, which is probably the electric organ, has been distinguished under it. It is said that the *silurus electricus* has the property of giving a shock or benumbing sensation like the torpedo, and that this shock is communicated through substances that are conductors of electricity.

(1105.) IV. A 4th electrical fish was discovered on the coast of Joanna, the chief of the Comoro islands, in lat. $12^{\circ} 13' 8''$ S. by Lieut. WILLIAM PATERSON. An imperfect account of it was published in the *Phil. Trans.* vol. 76. "The fish is described to be 7 inches long, and $2\frac{1}{2}$ inches broad; has a long projecting mouth, and seems of the genus *Tetrodon*. The back of the fish is a dark brown colour; the belly part of sea green; the sides yellow, and the fins and tail of a sandy green. The body is interspersed with red, green, and white spots, the white ones particularly bright; the eyes large, the iris red, its outer edge tinged with yellow." Mr CAVALLO adds to this description that, "Whilst this fish is living, strong shocks, like electrical shocks, are felt by a person who attempts to hold it between his hands. Three persons are mentioned in the account to have experienced this property of one of these fishes; but the want of opportunity prevented the trial of further experiments."

(1106.) That the shocks given by all of these fishes are really electrical, is now put past a doubt, by the discovery of the ELECTRICAL SPARK in the *Gymnotus*. "The strongest shocks of the *gymnotus*," says Mr Cavallo "will pass a very short interruption of continuity. When the interruption is formed by the incision made by a pen-knife on a slip of tin foil pasted on glass, and that slip is put into the circuit, the shock in passing through that interruption, will shew a small but vivid spark, plainly distinguishable in a dark room."

(1107.) Besides these animals which manifest their electric power evidently, by giving a strong shock, there are others in which the fluid seems to act by the emission of light. This indeed has not been proved by actual experiment, though it would certainly be well worth while to try whether by insulating a number of them, any more evident signs of electricity could be obtained. These creatures are of the insect tribe; some of them furnished with wings, as the shining flies in the warm countries; whilst others, as the GLOW-WORM, crawl perpetually on the earth. It is most probable also, that the sparkling of sea water is owing to the electricity of the insects in it.

SECT. III. EXPERIMENTS shewing the PHENOMENA OF ANIMAL ELECTRICITY.

(1108.) We shall now lay before the reader a few of the principal experiments on animal electricity, recorded by Mr Cavallo in his treatise; which he introduces with the following singular anecdote:

(1109.) "Previous to Galvani's discoveries, I find only one curious fact recorded, which seems to be materially connected with the present subject. It is related in a letter of Dr Cotugno, Professor of

Anatomy at Naples, to the Chevalier Vivenzio of the same place. This letter, a translation of which I shall subjoin, was published in the Italian translation of a book of mine on electricity, by the above mentioned Chevalier Vivenzio.

(1110.) "SIR, the observation, which I mentioned some days ago, when we were discoursed together of the electrical animals, upon which I said that I believed the mouse to be one of the number, is the following:—"

(1111.) "Towards the latter end of March I was sitting with a table before me; and observed something move about my foot, which drew my attention, looking towards the floor, I saw a small domestic mouse, which, as its coat indicated, must have been very young. As the little animal could not move very quick, I easily laid hold of it, the skin of the back and turned it upside down, then with a small knife that lay by me, I intended to dissect it. When first I made the incision into the epigastric region, the mouse was fit between the thumb and first finger of my hand, and its tail was got between the two fingers. I had hardly cut through part of the skin of that region, when the mouse vibrated between the fingers, and was so violently agitated against the third finger, that to my great astonishment I felt a shock through my left arm as if the neck, attended with an internal tremor, a full sensation in the muscles of the arm, and such giddiness of the head, that being afraid I dropped the mouse. The stupor of the animal lasted upwards of a quarter of an hour, nor could afterwards think of the accident without emotion. I had no idea that such an animal was electrical, but in this I had the positive proof of experience."

(1112.) "The action of electricity on a skinned frog (and indeed on other animals more or less) occasions a tremulous motion of the muscles, and generally an extension of the limbs."

(1113.) "When the nerves of a frog are killed and deprived of its integuments, and exposed to an electrified atmosphere, or, in short, disposed, as that by the action of the electric machine, or of any electrified body, a quantity of electric fluid is caused to pass through them, a contraction of the muscles takes place, with a tremulous convulsive motion, which may be reiterated for several hours after. Dr Galvani prepared a frog, by its legs attached to a part of the spine, but separated from all the rest of the body; and observed that whenever a spark was taken from a large conductor of an electrical machine situated at a distance from the prepared part of the animal, those legs moved with a kind of spasmodic contraction, sometimes strong enough to jump a considerable way. It was found necessary to place the prepared legs contiguous to some good conductor not insulated."

(1114.) "Whether the frog be brought into actual contact with the electrified body, or not, whether it be made to receive the spark itself, or not, the motions happen equally well, provided a quantity of electric fluid be caused to pass through it, which may be done merely by the pressure of the action of electric atmospheres. When the electricity is made to pass through the frog, by the immediate contact of the electrified body, a small

smaller quantity of it is sufficient to occasion the movements, than when it is made to pass from one conductor to another at a certain distance from the prepared animal.

(1115.) 'If the electric atmosphere be so strong as to occasion little sparks between the conductors contiguous to the animal, or if it be capable of affecting an electrometer placed near the animal; then even a whole frog, a lizard, a mouse, or a sparrow, will be strongly affected with violent convulsions. When the animal is insulated, and electricity is made to pass through its body, as a whole living frog is affected by the passage of so small a quantity of electricity as is discharged from a middling prime conductor, that is just capable of affording a small spark. In this case, if a wooden phial be used, a much smaller quantity of electricity will be found sufficient for the purpose, than such a charge of it as cannot afford a spark, that can just produce a sensible divergence of the pendulums of an electrometer.

(1116.) 'But a frog prepared, especially after the manner of Dr Galvani, is affected by an incomparably smaller quantity of electricity.—Volta has observed, that so small a quantity of electricity as is absolutely incapable of occasioning a divergence in the most sensible electrometer, such as may be observed by his condenser of electricity, is sufficient for the purpose. Thus if a glass phial be charged, and discharged, and afterwards be disposed, so that the prepared frog be placed in the circuit between its inside and outside coating; the passage of that small residuum of electricity is sufficient to produce the contractions, &c. being sensible of so small a quantity of electricity the prepared frog becomes a most sensible sort of electrometer, which perhaps hereafter may be of singular use in some nice electrical experiments.

(1117.) 'When the preparation and disposition of the frog is such, as that the electric fluid can pass through a nerve to the muscle or muscles, then the movements are in general much stronger, than when it is applied to any other part of the body.

(1118.) 'Dr Galvani had the curiosity of trying whether the electricity of the clouds produced the same effect on the prepared limbs, as artificial electricity of the ordinary machines; and for that purpose he extended a conductor to the top of a house to the prepared animal, which was sometimes laid on a table in the open air; and at other times was enclosed in a glass receiver. On this preparation the thunder and lightning produced the same effects as the sparks from the electrical machine. The same contractions took place, and they were stronger or weaker according to the distance and quantity of lightning. Thus far the effects might have been naturally expected; but a remarkable circumstance was observed, which serves to explain another phenomenon of nature.—It was found, that instead of one contraction at every clap of thunder, the limbs were affected with a sort of tremor or succession of convulsions, which seemed to be nearly equal in number to the repetition of the thunder, viz. at succession of explosions which forms the rumbling noise of thunder. Now this observation proves, that the rumbling noise is not the echo of

a single explosion, or the successive arrival of the vibrations produced at different distances, though at the same moment of time; but that it is produced by a quick succession of several explosions, which indeed seems to be confirmed by observing, that the clouds are very imperfect conductors, in which state they are not likely to receive a full and single stroke of electricity from other clouds, or from the earth.

(1119.) 'The sensibility of the prepared animal is greatest at first, but it diminishes by degrees till it vanishes entirely. In general, frogs, and other animals with cold blood, retain the property of being affected by electricity much longer than those possessed of hot blood. With some of the latter, the sensibility is very weak, and will hardly last for a few minutes after the death of the animal; whereas some of the animals with cold blood, and especially frogs, which are by far the fittest animals for such experiments, have frequently retained that property for upwards of 12 hours, and sometimes even for two or three days.

(1120.) 'Thus far we have described the effects of electricity on dead animals; we shall now come to the most curious part of the subject, which is, that the same motions, the same convulsions, &c. and for a time about equally long, can be produced in dead, and even in living animals, without the aid of any apparent electricity.—In an animal recently dead, detach a nerve from the surrounding parts; taking care to cut it not too near its insertion into the muscles; remove the integuments from over the muscles depending on that nerve; take a piece of metal, as a wire, touch the nerve with one extremity, and the muscles with the other extremity of the wire, and the consequence will be, that the muscles will move exactly as if a quantity of electricity were sent through them. This experiment will answer equally well when the preparation is laid upon an insulated stand, as when it communicates with the ground. If the communication between the nerve and the muscles, instead of being formed by means of metal or other conductor of electricity, be formed of substances that are non-conductors, as glass, sealing wax, oils, &c. then no motion will take place.

(1121.) 'When the application of the metal or metals is continued steadily on the part, the contractions will cease after a certain time, and on removing the metal, seldom, if ever, any contraction is observed.

(1122.) 'The conducting communication between the muscle and the nerve may consist of one or more pieces, and of the same or of different bodies connected together, as metals, water, a number of persons, and even wood, the floor, and walls of a room. But it must be observed, that the less perfect conductors will answer only at first, when the prepared animal is vigorous; but when the power begins to diminish, then only the more perfect conductors, as the metals, will answer, and even these are attended with various effects.

(1123.) 'It is in this nearly exhausted state of the animal electricity, that the various conducting powers of different substances can be observed; and thus amongst the experiments which I made with Dr LIND, we formed the following list of

conductors, which are arranged in the order of their perfection, beginning with the best. Yet I do not mean to offer this as a very correct arrangement; for though it has been deduced from a great number of experiments, their result has not however been very constant. A considerable difference is frequently occasioned by circumstances that are hardly perceivable; such as the changeable state of the prepared animal, the surface of the substances used, the quantity of contact, &c.

(1124.) 'Malleable platina. Silver. Gold. Quicksilver. Copper. Brass. Tin. Lead. Iron. The human body. Salt water. Fresh water.

(1125.) 'The metallic ores are not so good conductors as the purified metals themselves, and their conducting power is various according to the nature of the ores, but even the metallic salts are tolerably good conductors.

(1126.) 'It is very remarkable, that the flame of a tallow candle, which is a good conductor of common electricity, will not conduct the animal electricity, when placed in a short interruption made in the circuit of communication. Charcoal placed in the same situation as the flame of the candle, was also found to be a non-conductor, except when it was actually burning, in which state it conducted tolerably well; but Mr VOLTA says, that he has found some pieces of charcoal that acted as well as the metals.

(1127.) 'Vitriolic acid, and, what is very remarkable, alcohol, appear to conduct this property rather better than water.

(1128.) 'This power, like the common electricity, passes through the substance, and not only over the surface of conductors; hence a wire surrounded with sealing wax, or other non-conducting substance, except where it touches the animal preparation, will answer as well as when it is not coated with a non-conducting substance.

(1129.) 'When various conductors are placed contiguous to each other in the circuit between the muscle and the nerve, their contact must be perfect; otherwise the desired effect will not take place. To lay one metal upon the other is seldom sufficient, unless they are pressed against each other. If two or more persons join hands, the contact must be frequently rendered more perfect by the interposition of water, viz. by moistening the fingers, especially with salt water.

(1130.) 'The arteries and the veins are not so good conductors as the nerves; for when a blood vessel forms part of the circuit of communication, the contractions will take place only when nervous ramifications are adhering to it, and if these be carefully separated, the motions will not happen.—The same thing may be said of the tendons, the bones, and the membranes; for when either of these parts is separated from the body, and is introduced in the circle of communication between the muscles and nerves of a prepared frog, no motion will ensue, except indeed when those parts are full of moisture, and are in immediate contact with the nerve of the prepared frog.—Dry nerves are not conductors of animal elec-

tricity. Dr VALLI found, that the internal substance of a nerve conducts much better than its external, or coat.

(1131.) 'If part of the nerve be wrapped up in a thin piece of metal, as tin foil or sheet lead, and the conducting communication, or conducting metallic rod, be applied from this coating or armour to the muscles, the motions will, in that case, be much stronger. The muscle itself may also be armed with, or simply laid upon, metal, and on completing the communication between the armour of the nerve and that of the muscle or muscles, the motions will be very vigorous and will continue much longer, than when no coating or armour is used. Besides metals, the armour may consist of water or of other conductors as will be shewn in the sequel. The use of the armour seems to be the augmentation of the point of contact. The effect has been observed to be much greater, and to succeed more constantly, when the conducting rod is put first in contact with the muscle or its coating, and is then brought with its other extremity into contact with the armour of the nerve, than when it is placed in contact with the nerve first. Hence, when the point of the animal is much weakened, the former will answer, but the latter will not.

(1132.) 'It is very singular, that in this experiment it is necessary to employ two different metals, viz. One to be in contact with the nerve and another to be in contact with the muscle, for if they be of the same sort, as both of silver or both of tin foil, the contractions will not take place. It must however be observed, that in the beginning, when the power of the prepared animal is strong, the convulsions will happen even when the two coatings are of the same sort of metal; though not nearly so well as when two different metals are used. But indeed in the beginning, when the animal electricity is strong, the motions are frequently produced without any coatings, even without any conducting rod. The striking of the table, or the approach of a piece of metal, without any actual contact, will frequently excite the movements†. But this sensibility is of short duration; after which period the two armours of the same sort of metal will occasion any motion whatever. The least difference, however, in the quality of the two coatings, is sufficient to produce weak motions, when they are of silver of different degrees of purity, or of different sorts of lead, &c. It is for the same reason, that if they consist of two metals that have a great affinity to each other, the effect is not so great as when the two metals are dissimilar in their nature. Thus it has been found that gold and silver do not answer so well as tin and zinc, or gold and lead. Either gold or silver, or steel, or copper, or molybdena, when combined with tin or lead, or especially with zinc, are very good exciters of the contractions in prepared animals. But the combinations of any two of the former metals are much inferior in power. Large pieces of the metals, and

† "I have likewise, says Dr VALLI, seen in two frogs the movements occur at the distance of half an inch from the scissars, and which ceased at the moment I insulated the scissars." Exp. on An. El. p. 10.

ample surfaces, seem to answer better than small and compact pieces for these experiments; for with the former contractions may be excited, when the latter are unable to produce any effect.

(1133.) 'The motions will be also excited when the metals are not in immediate contact with the prepared limb, provided they form part of the circuit of communication. Thus, lay a prepared limb upon a table, hold the nerve in one hand, and a piece of zinc in the other hand; lay a piece of silver upon the table at about one or two inches distance from the prepared muscles, and make a communication between the muscles and the silver by means of water or some other good conductor. If now you touch the said piece of silver with the zinc which you hold in one hand, the contractions will take place. The same effect will happen, if the two pieces of metal be first in contact, and then the operator touches the wire of the preparation with his finger.

(1134.) 'The preparation of the frog, or other animal, for this experiment, generally consists in attaching one of the principal nerves from all the bounding parts, where it enters a member susceptible of motion, and arming it with a metallic rod. On making the communication, the motion will take place; but the preparation which answers best, is delineated in fig. 16. and 17. Plate XXXIV. which, for the sake of distinction, we call in the following pages, call the *usual preparation*; it being, in fact, that which has been more frequently and more advantageously used. It is made in the following manner: Separate with a pair of scissors the head and upper extremities of the frog, in the line A B, from the rest of the body. Open the integuments and muscles of the abdomen, and remove the entrails; then you will expose the crural nerves, as shewn in fig. 16. which in this animal come out of the spine at a considerable distance above the pelvis; viz. from the line C D. Then pass one blade of the scissors under the said nerves, and cut off the spine with a sharp knife close to the thighs in the line E F, by which means the legs will remain attached to the body by the nerves alone. This done, leave only a small bit of the spine attached to the crural nerves, and cut off all the rest. Thus you will see the two legs G H fig. 17. of a frog adhering to a bit of the spine A C D, by means of the crural nerves C E, D F. These legs must be stayed in order to lay bare the muscles. The metallic armour, which generally consists of a piece of tin plate, must be placed round the nerves very near the spine, viz. at C D, or round the whole bit of the spine A D, and the extremities of the nerves next to it. A frog thus prepared, and touched by means of a conducting rod applied to the muscles and to the armour of the nerves, will act vigorously for a considerable time. Some contractions have been observed several hours, and even days later; but the power is gradually diminishing, and in general it can seldom be perceived after two or three hours.

(1135.) 'With a frog prepared in the above described manner, one may shew the experiment in various ways; but the two following methods are peculiarly eligible, because they produce very strong and striking movements.—Hold the prepara-

tion by the extremity of one leg, the other leg hanging down, with the armed bundle of nerves and a bit of spine lying upon it. In this situation interpose a piece of silver, as a half-crown, between the lower thigh and the nerves, so that it may touch the former with one surface, and the metallic coating of the latter with the other surface, or with its edge; and you will find that the hanging leg will vibrate very powerfully, sometimes so far as to strike against the hand, which holds the other leg.

(1136.) 'The other method is the following: Put two wine-glasses full of water contiguous to each other, but not actually touching. Place the thighs and legs of the prepared frog in the water of one glass; and laying the nerves over the edges of the two glasses, let the bit of spine and armour touch the water of the other glass. This done, if you form the communication between the water of the two glasses by means of the conducting rod, or put the fingers of one hand into the water of the glass that contains the legs; and holding a piece of silver in the other hand, touch the coating of the nerves with it, you will find that the prepared legs will move sometimes so powerfully as to jump fairly out of the glass.

(1137.) 'We have said above, that whenever a limb of an animal is prepared, and the communication is formed between the nerve and the depending muscle, the contractions will take place; but we must now take notice of a very remarkable exception; which is that those parts, the motion of which is subject to the will of the animal, are susceptible of contraction by the application of metals; but of the involuntary muscles, the heart alone is capable of being contracted. This peculiar property of the heart was satisfactorily proved by Dr FOWLER, with the hearts of frogs, cats, and rabbits.

(1138.) "At length," says he, "I was so happy as to succeed completely. On the 18th of March last, in presence of my friends, Mr HUNTER, and Mr THOMPSON, having dissected away the pericardium from a frog's heart, which had an hour before ceased spontaneously to contract, I removed the muscles, and cellular membrane covering its nerves and large blood vessels; I then placed one end of a rod of pure silver in contact with one side of these nerves and blood vessels, and one end of a rod of zinc on the other, both of them at about the distance of the third part of an inch from the auricles of the heart. On bringing the opposite ends of these rods in contact with each other, the auricle first, and then the ventricle of the heart, immediately contracted, and repeated their contractions as often as the ends of the metal rods were made to touch each other."

—The contractions were both more vigorous, and more constant, when the metals were placed in contact with the heart itself, than when touching only its blood vessels and nerves. In order to the complete success of this experiment, it is necessary that the spontaneous contractions of the heart should nearly, if not altogether, have ceased; and when in this state, the experiment is rendered still more satisfactory by removing the heart from the body of the frog, and laying it upon a plate of zinc." *Ann. El.* 75—77.

(1139.) 'It has been observed, by way of assisting the investigation of the above remarked singularity, that the muscles, which are not subject to the will, do not possess so large and so many nerves as the other muscles.

(1140.) 'The application of the metallic rod to the prepared nerve and depending limb, does not produce contractions in that limb only; but it contracts several other parts that are left attached to it. Thus, if the crural nerve be detached and armed with metal, whilst every other part of the animal is left untouched, on applying the metallic rod to the said nerve, and to the muscles of the leg, the upper as well as lower limbs will contract: even the eye-lids, and other parts of the head, will be seen to move. *Galv. de Vir. El.* p. 28.

(1141.) 'Dr MONRO observes, that the application of metals to the head of a frog, or to any part of its spine above the sixth vertebra, does not occasion any convulsions of its hind legs; by which he is led to suppose that the nerves of the hind legs are not derived solely or chiefly from the brain or *cerebellum*.

(1142.) 'By repeatedly applying the conducting rod to a prepared animal, its power is exhausted much sooner, than if it be used more sparingly. It is very remarkable, that when a prepared frog is almost exhausted of its animal electricity by the often repeated application of the metals, its power will be in a great measure restored by leaving it at rest for some time. This is analogous to the recovery of strength, which rest alone can produce in living animals, when over-fatigued, and may probably depend upon the same cause.

(1143.) 'When a frog prepared in the usual manner, is almost exhausted of its power by the often repeated application of the conducting rod, remove the armour to another part of the same nerve, especially if it be nearer to the muscles, and you will find the power in a great measure restored. This is a curious observation, and naturally leads us to inquire, what does the nerve lose by the application of the armour in this experiment?—It looks as if that part of the nerve were alone concerned in the production of the power called animal electricity.

(1144.) 'A ligature made on the nerve close to its insertion into the muscle, frequently prevents the motions: but if it be made at a distance from the muscle, the experiment succeeds as well as without the ligature.

(1145.) 'The animal electricity is much more easily weakened by obstructing the circulation of the blood, than by interrupting the nervous communication. Thus, if the sciatic nerve of a living frog be divided, and the crural artery of another living frog, or the leg of the same frog, be tied fast, so as to stop the circulation through it, and if, some hours or days after this, the legs be prepared in the above described manner, the contractions excited by the metals in that leg, whose artery has been tied, will be found to be weaker and to vanish much sooner than in the other leg, the nerve of which had been divided.

(1146.) 'Amongst the other experiments I made with Dr LIND, we had the curiosity of trying whether the communication of animal electricity

might be interrupted by surrounding that part of the nerve which is between the armour and the leg with white wax; but on applying the conducting rod, the effect was found to be the same as when the nerve was not enveloped in wax.

(1147.) 'I took, says Dr VALLI, a frog, which I divested of its integuments. I laid bare the spine, and divided it above the origin of the crural nerves, and also at the origin of the lower extremities. Thus the frog was in two parts, communicating only by the crural nerves. These nerves I coated; and upon placing one of the branches of the conducting rod on the coating, and the other on the trunk, the lower extremities were instantly agitated as well as the upper part and fore-legs. If the experiment be repeated when the nerve is tied, then no motion will take place in the lower extremities. If, instead of placing the conducting rod on the trunk, it be placed on the ovaries, livers, lungs, head, or hind legs, the experiment answers equally well.

(1148.) 'The application of artificial electricity will generally excite motions in those prepared frogs, whose animal electricity has been exhausted by the repeated application of the conducting rod. It is very remarkable, that the application of artificial electricity has sometimes revived in great measure the animal electricity, so that afterwards motions could be again excited by the application of the conducting rod.

(1149.) 'By the application of armours of different metallic substances, and forming a communication between them, the motions may be excited even in an entire living frog, and likewise in other living animals, particularly eels and flounders. The experiment is performed thus: A living frog is placed upon a piece of zinc, with a slip of tin foil pasted upon its back. This done, whenever the communication is formed between those two armours, especially when silver is used, the spasmodic convulsions are excited not only in the muscles which touch the metals, but also in the neighbouring ones. The slip of tin foil may be omitted when silver is used for the conducting rod. The experiment may be performed entirely under water.

(1150.) 'This experiment may be made with flounder in a similar, easy, and harmless manner. Take a living flounder, such as can almost always be found at the fish-mongers, lay it flat on a pewter plate, or upon a sheet of tin foil, and place a piece of silver, as a shilling, a crown piece, the like, upon the fish. Then, by means of a piece of metal, complete the communication between the pewter plate or tin foil and the fish piece, on doing which the animal will give evident tokens of being affected. The fish may afterwards be replaced in the water to preserve it for farther use.

(1151.) 'Excepting frogs and the above mentioned fishes, this experiment will hardly succeed with other living animals, unless part of the skin be removed. A lizard or a mouse, for instance, being fastened to a table by means of pins, or otherwise, an incision must be made on its back as far as the flesh, and a piece of tin foil must be applied to it. A similar incision must be made in another part, as the thigh or leg, and a piece of

silver must be applied to it. Things being thus prepared, whenever the usual communication is formed between the two metals, the convulsions are excited, which, *ceteris paribus*, are stronger or weaker as the incisions happen to be made nearer to, or farther from, some principal nerve. And for the same reason, if in this experiment a nerve happen to be laid bare, and the metal be put in contact with it, the usual metallic communication will be attended with more violent movements. With insects that have a very dry outside, the incisions must be made very deep.

(1152.) 'It often happens in those experiments, and especially when performed with frogs and chickens, that the metallic application cannot excite any motions in the prepared limb, which however can be freely moved by the will of the animal. And, on the contrary, at other times the application of the conducting rod excites motions in limbs, which the animal seems to have no power of moving. Thus the application of opium to a muscle, or to a nerve, stops the voluntary motions of the muscle or muscles depending on that nerve, yet the application of the armours and metallic rod of communication, will produce motions in them.—There seems evidently to be in the animal frame a power of counteracting in a great measure the action, whatever that may be, of the metallic application. When the animal is vigorous and upon his guard, the contractions can seldom be excited by this means; whereas, when a part of the body has been rendered previously more sensible, by irritation, scarification, &c. then the application of the metals is attended with more considerable effects.

(1153.) 'Even the living human body can be rendered sensible of the action of metallic applications, and both the senses of taste and sight may be excited by it. Let a man lay a piece of metal upon his tongue, and a piece of some other metal under the tongue, so forming the communication between those two metals, either by bringing their edges into contact, or by the interposition of some other piece of metal, he will perceive a peculiar sensation, a kind of cool and subacid taste, not exactly like, and yet not much different from, that produced by artificial electricity. The metals which answer best for this experiment are silver and zinc, or gold and zinc. The sensation seems to be more distinct when the metals are of the usual temperature of the tongue. The silver or gold may be applied to any other part of the mouth, to the nostrils, the ear, and other sensible parts of the body; whilst the zinc is applied to the tongue, and on making the communication between the two metals, the taste is perceived on the tongue. The effect is more remarkable when the zinc touches the tongue in a small part, and the silver in a great portion of its surface, than *vice versa*. Instead of the tongue, the two metals may likewise be placed in contact with the roof of the mouth as far back as possible, and on completing the communication between them, a strong taste or irritation is perceived. Mr John Robison, in a letter to Dr FOWLER, gives the following curious observations: "I had," says he "a number of pieces of zinc, made of the size of a shilling, and made them up into a rouleau, with as many

shillings. I find that this alteration, in some circumstances, increases considerably the irritation, and expect on some such principle to produce a still greater increase. If the side of the rouleau be applied to the tongue, so that all the pieces are touched by it, the irritation is very strong and disagreeable. This explains what I have often observed, the strong taste of soldered seams of metal. I can now perceive seams in brass and copper vessels by the tongue, which the eye cannot discover, and can distinguish the base mixtures which abound in gold and silver trinkets."

(1154.) 'And farther on he subjoins the following paragraphs: "Put a plate of zinc into one cheek, and a plate of silver (a crown piece) into the other, at a little distance from each other. Apply the cheeks to them as extensively as possible. Thrust in a rod of zinc between the zinc and the cheek, and a rod of silver between the silver and the other cheek. Bring their outer ends slowly into contact, and a smart convulsive twitch will be felt in the parts of the gums situated between them, accompanied by bright flashes in the eyes, and these will be distinctly perceived before contact, and a second time on separating the ends of the rods, or when they have again attained what may be called the striking distance. If the rods be altered, no effect whatever is produced.

(1155.) "Care must be taken not to press the pieces hard to the gums; this either hinders us from perceiving the convulsion, or prevents it. I find too, that one rod, whether zinc or silver, is sufficient for the communication, and even bringing the two pieces together will do as well, or perhaps better, but the rods are easier in the management."

(1156.) 'The communication between the two metals may be made various other ways, some of which may be more pleasant and satisfactory; place, for instance, two large glasses full of water contiguous to each other, but so as not to touch; put an oblong piece of tin foil with one extremity into the water of one glass, and with the other extremity projecting out of it;—in the water of the other glass put one end of an oblong piece of silver, and let the projecting parts of those two metals touch each other: then dip the extremity of the tongue in the water of the first glass, and dip the fingers of one hand into the water of the second glass, on doing which, the subacid taste will be perceived and will continue as long as the fingers and the tongue are kept in that situation.

(1157.) 'In order to affect the sense of sight by means of metals, let a man in a dark place put a slip of tin foil upon the bulb of one of his eyes, and let him put a piece of silver, as a spoon or the like, in his mouth. On completing the communication between the spoon and the tin foil, a faint flash of white light will appear before his eyes. This experiment may be performed in a more convenient manner, by placing a piece of zinc between the upper lip and the gums as high up as possible, and a silver piece of money upon the tongue, or else by putting a piece of silver high up in one of the nostrils, and a piece of gold or zinc in contact with the upper part of the tongue, for in either of those cases the flash of

light will appear whenever the two metals are made to communicate, either by the immediate contact of their edges, or by the interposition of other good conductors of animal electricity.

(1158.) ' Besides the sight and taste, no other sense of the living human body has been affected by the application of different metals †.—It is necessary to observe, that in performing experiments with living animals, the various state and disposition of their bodies, produces a great variety of results; especially with living frogs, the effects are not always proportionate to the apparent strength and vigour of the animal, and sometimes they are even in the inverse proportion of it. Some persons have had pains produced by the application of metals into their mouths or ears. "After performing," says Dr MORRO, "this experiment repeatedly, I constantly felt a pain in my upper jaw at the place to which the zinc had been applied, which continued for an hour or more; and in one experiment, after I had applied a blunt probe of zinc to the Septum Narium, and repeatedly touched with it a crown piece of silver applied to the tongue, and thereby produced the appearance of a bath, several drops of blood fell from the nostrils; and Dr Fowler, after making such an experiment on his ears, observed a similar effect."

(1159.) ' Chickens and rabbits killed by drowning, and afterwards exposed to the action of metals, by applying the conducting rod to the muscles, and to a nerve previously laid bare and armed, have shewn various effects. In some every principle of motion was extinct, others shewed weak motions. Sometimes the convulsions were pretty strong, though not of long duration; and in some instances, by the excitation of those motions, the animal has been actually restored to life. It has been likewise observed in other instances, that animals which were almost dead, have been revived by exciting this influence.

(1160.) ' Frogs killed by an electric shock, that is just sufficient to deprive them of life, and then prepared in the usual manner, are susceptible of the motions; but when they are killed by means of very strong shocks, and also when a very strong electric shock is sent through the nerve and muscle of the prepared limb of a frog, the motions will no longer appear.

(1161.) ' Frogs have been killed by laying bare the brain, and irritating it, or by applying opium to it. Frogs have been stupified and rendered insensible of torture by the application of snuff. Dogs have been killed by means of hemlock and of arsenic. Frogs and some other animals have been killed by being confined in inflammable air, or nitrous air, or dephlogisticated air. Lizards have been poisoned with tobacco, and have died in convulsions. But in none of these instances the animal electricity was destroyed.—In the animals killed by confinement in the above mentioned elastic fluids, the motions were very weak, and took place at great intervals of time.

(1162.) ' Dr FOWLER made the following cu-

rious experiment with opium. He made a tight ligature round the sciatic nerve of a frog, also divided the sciatic nerve of another frog, and then applied opium to their brains. After this preparation, he excited the motions in their legs by the usual application of the metals, and found that the leg, whose nerve had been tied or divided, continued to be contracted for a much longer time than the other leg.

(1163.) ' Air vitiated by the combustion of sulphur, diminishes the effects of animal electricity, but in a less degree when the prepared frog is exposed to it, than when the living one is confined and suffered to die in it. In the latter case, the muscular fibres sometimes become lax and soft; in both cases the motions are weak, and vanish very soon.

(1164.) ' The moving power of the prepared legs of a frog, is much diminished by being kept in a vessel of nitrous air for a certain time, and is entirely destroyed by a longer continuance in that elastic fluid.—Inflammable air acts in a similar manner, though not so powerfully. In those cases the muscles do not appear to have suffered any alteration.—Perhaps the nerves alone are affected by it.

(1165.) ' Animals starved to death, or killed by means of corrosive sublimate, and afterwards prepared and subjected to the action of metals, have shewn no motion whatever.'

SECT. IV. REFLECTIONS ON THE PRECEDING EXPERIMENTS.

(1166.) ' The facts,' (continues Mr CARALLO,) ' which we have noticed above, shew, that in animals dead as well as living, the faculty of being put in motion, of being convulsed, &c. by the application of metals and other bodies, possesses but one characteristical property in common with electricity; viz. its being conducted by certain bodies, and not by others. Upon the whole, the conductors of the one are also conductors of the other; yet this law is not without some remarkable exceptions. The convulsion occasioned by the application of metals, is indeed analogous to the electric shock, but that convulsion is likewise the effect, though in a more limited manner, of other stimuli. The other two peculiar properties of electricity, namely, the light, and the attraction and repulsion, have not been discovered in the muscular power or animal electricity of living or dead animals. Upon the supposition that it is the same thing as electricity, the want of light may perhaps be attributed to its very rarefied state and small quantity. But with respect to the attraction and repulsion, assertions have been published of those properties having been actually discovered; I believe, however, that those appearances of attraction and repulsion must be attributed to other causes, as the following paragraphs will shew.

(1167.) ' It has been said, that 14 frogs having been prepared in the usual manner, the armoirs of all their crural nerves were connected together, and

† The application of different metals has been tried with persons that have undergone surgical operations, when a nerve has been laid bare, and in that case the contractions have been found to take place as in other animals.

and the same thing was done with the muscles of all their legs; the communication was then made between those two armours, viz. that which communicated with the muscles, and that which communicated with all the nerves; in doing which two bits of straw, which happened to lie near the seat of communication, were attracted by it.—*Le Journal de Physique* likewise mentions, but without describing the method, that undoubted proofs of repulsion, occasioned by animal electricity, had been observed with an electrometer. I also find recorded, that the hair of a mouse prepared for such experiments, was observed to move whenever a conductor was presented to it, and besides, at it moved when situated near the armour of a combination, or battery, of several prepared frogs. *Phil. Exp. on An. El.* p. 112.

(1168.) 'With respect to this last observation, however is conversant with electrical experiments, I naturally remark, that the hair of certain animals is so easily electrified by the slightest friction, it continues so long in that state, that the above mentioned appearances of attraction or motion, as well with much more propriety be attributed to common than to the animal electricity. But other assertions being more positive and less equivocal, induced Dr LIND and myself to put it subject to the test of actual experiments.

(1169.) 'For this purpose we prepared six frogs the usual manner, and laid their legs all parallel on silver plates, which rested upon a pane of glass. A silver wire was placed in contact with the tinfoil armours of all their crural nerves, and a wire was raised above the glass by means of sealing wax. With this preparation, the completion of the communication between the two armours was formed various ways. We placed a adulum of gold leaf very near the circuit; we used the pendulum itself, which was exceedingly sensible, in the circuit of communication; one of the metallic conductors coming within about the sixth part of an inch of its extremity; we also employed a very sensible electrometer, disposing it in various situations; but in none of those cases did we discover the smallest sign of attraction or repulsion; neither could the power be transmitted when the smallest interruption existed in the circuit of communication.—We made a cut with a pen-knife across a piece of tinfoil, fastened on a stick of sealing wax. This interruption did hardly be so great as the sixth part of an inch, and certainly it was not greater. We attempted to form the communication by means of an apparatus in a very dark room, in hopes of observing the spark, but no light whatever could be perceived, and indeed it could hardly be expected, considering that this small interruption was quite sufficient to prevent the motions, or the communication of that power, which, for want of a better name, we call animal electricity.

(1170.) 'The principal phenomena of animal electricity, viz. the property of being put in motion by a metallic or other communication made between the nerves and the muscles, is not peculiar to a few animals only, but seems to be a property of all animals in general; a law of nature, which admits of few exceptions, and even those exceptions are of a very doubtful nature. The

experiments have already been tried with a great variety of terrestrial, aerial, and aquatic animals. The human body, whilst undergoing certain surgical operations, or its recently amputated limbs, have been convulsed by the application of metals. From the ox and the horse down to the fly, the effects of metallic applications have been repeatedly and unequivocally observed. With some the power lasts longer than with others; the movements also are more or less evident and powerful, according to the various nature and disposition of the animals. The leg of a recently dead horse was agitated so violently by the application of a shilling and a bit of tinfoil, that the strength of a robust man was unable to check the blow. Animals possessed of cold blood, are in general more retentive of that power than those which have hot blood; but amongst those of the same class a considerable variety is observable, which arises from the different strength or irritability of their fibres, and probably from other causes that are as yet unknown. The animals which form an exception to the above mentioned general law, are several worms, some other insects, the oyster, and a few other small sea animals. But as the organization of those animals seems not to be possessed of much sensibility, nor admits of much motion, it may be presumed that the effects of the metallic application are only too weak to be perceived by our senses; and in fact several animals, which some time ago were thought not to be affected by the contact of metals, have been lately caused to contract in consequence of the discovery of more active metallic combinations, or of some of their more sensible parts.

(1171.) 'The preceding pages contain all the remarkable facts that I have been able to collect, relative to a subject which is likely to become of great importance. Those surprising effects of an unknown cause, generally inexplicable, and sometimes contradictory, seem to admit of no theory sufficiently probable or satisfactory, nor can we yet see how they may be applied for the benefit of mankind. An attentive consideration of the subject will naturally suggest several doubts and queries, which can only be answered by future experiments and discoveries.—In what manner does artificial electricity affect the muscles? Does it act as a mere stimulus or otherwise? Where is the animal electricity generated, and by what mechanism is it transmitted from one part of the body to another?—Does it proceed from the brain, or is every nerve actuated with that generating power?—What reason can there be for the necessity of using two different metals?—And after all, are those phenomena really the effects of electricity, or of some other unknown fluid *vis generis*?

(1172.) 'The want of several of the characteristic properties of electricity, may perhaps be owing to the weak state of that power in animals, and therefore it would be unphilosophical to admit another agent as the cause of those muscular motions, &c. unless a property of it could be discovered, which is absolutely repugnant to the ascertained laws of electricity. In that case we might with propriety say, that as there are several liquids or visible fluids like water, spirits, &c. which have

diverse

diverse properties in common, at the same time that they are essentially different; that as there are several invifible and permanently elastic fluids like common air, inflammable air, fixed air, &c. which are very difimilar, though poffeffed of certain common properties; fo there may be feveral forts of more fubtile fluids effentially different from each other, yet bearing fome analogy to the electric fluid.

(1173.) 'Having, towards the beginning of this account, fhewn the poffibility of the electric fluid exifting in an unbalanced ftate amongft the various parts of the animal body, I fhall conclude with a few remarks concerning the origin of the accumulation or rarefaction of that fluid in general, which may probably promote the investigation of this curious fubject.

(1174.) 'There is a well known and very extenfive law in the fcience of electricity, which is, that the mere proximity of an electrified body, is fufficient to induce a contrary electricity in another body, without its lofing any part of its own.* Upon this principle, if the permanent exiftence of a quantity of electricity in any place be admitted, one may eafily conceive how other bodies may be electrified by it, and alfo how the electricity may thereby be accumulated to any degree. But it will naturally be asked, where is that electrified body, the firft term of the feries, from which the accumulation may be derived?—To this I anfwer, that ftrictly fpeaking, the common notion of the electric fluid exifting in a balanced ftate amongft the bodies of our globe, is by no means true. Great quantities of electricity accumulated on bodies that are not abfolutely infulated, will be readily difperfed amongft the furrrounding bodies,

in the fame manner as a quantity of water, which is poured out of a vefel upon any furface, will foon find its level, by defcending from the height to the loweft places. But let a man try to remove the laft drops of water, or particle of moiſture, from the inverted vefel, and he will find it very difficult to fucceed. In like manner thofe perfons, who are accuftomed to make nice electrical experiments, know how extremely difficult it is to remove fmall refiduum of electricity from Leyden phial, from a piece of wood and other bodies, which have been once electrified.

(1175.) 'It is evident, therefore, that a beginning of electric accumulation is by no means difficult to be found. But, independent of this remark, if we confider that electricity is generated by evaporation, condensation, rarefaction, ftriction, and other caufes; and that thofe nature proceffes happen continually and in every place, we muſt then conclude, that, far from remaining in a balanced or level ftate, the electric fluid muſt be continually fluctuating amongft the various fubftances of our globe. It is accumulated ſome, and rarefied in others; the accumulation removed from the latter to the former, and perhaps it feldom happens that two bodies of fize, ſhape, bulk, and fubftance, contain exactly equal quantities of electric fluid. This accumulation and rarefaction of it, this poſitive and negative ftate, is in moſt cafes too fmall to affect our electrometers and other inftruments; but the effects of very fmall quantities of artificial electricity on animals, ſhew that it is by no means too fmall for the mechanifms framed by the moſt exalted hand of nature.'

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* ELECTRICK. See ELECTRICAL.

ELECTRICS. See ELECTRICITY, *Index*.

ELECTRICUS LAPIS, the ELECTRICAL STONE of LINNÆUS, or TOURMALIN. See ELECTRICITY, *Index*, and TOURMALIN. The Dutch call it *afteuricker*, from its property of attracting ashes, when near the fire. See *Linnæi Flora Zeylonica*.

ELECTRIDES, in ancient geography, islands in the Adriatic sea, so named from the quantity of amber which they produced. They were at the mouth of the Po, according to Apollonius of Rhodes, but some historians doubt their existence.

ELECTRIFEROUS, *adj.* producing amber.

ELECTRIFICATION, or ELECTRIZATION, *s. f.* the state of being electrified.

To ELECTRIFY, *v. a.* To communicate to a body the powers of attraction and repulsion, or by other electrical property. To electrify a person, signifies to give one a flash, spark, or shock of ELECTRICITY.

ELECTRIZATION. See ELECTRIFICATION.

ELECTROMETER, *n. f.* instruments used

ELECTROPHORUS, *n. f.* } forming electrical experiments.

ELECTRO-VISUMETER, } cal experiments.

of ELECTRICITY, *Index*.

ELECTRUM, in natural history.

(1.) * ELECTUARY. *n. f.* [*electarium*, *Calius* *herd.* which is now written *electuarium*.] A form of medicine made of conserves and powders, in the consistence of honey. *Electuaries* made up of honey or syrup, when the consistence is too thin, ferment; and when too thick, candy. By which the ingredients will be altered or impaired. *Quincy*.—We meet with divers *electuaries*, which have no ingredient, except sugar, common to any two of them. *Boyle*.

(2.) ELECTUARY, ETYMOLOGY OF. Vossius observes, that all the remedies prescribed for the sick, as well as the consecrations taken by way of regale, were called by the Greeks *ελεγκματα*, and *ελεγκμα*, from the verb *ελεγω*, I lick; whence, says he, was derived the Latin *electarium*, and afterwards *electuarium*. This conjecture he supports from the use of Sicily. The Bollandists, who relate this etymology, seem to confirm it. For the composition of electuaries, see PHARMACY, *Index*.

ELEEMOSYNA ARATRI, } or PRO ARA-
ELEEMOSYNA CARUCARUM, } TRIS, in our ancient customs, a penny which king Ethelred ordered to be paid for every plough in England towards the support of the poor. It is also called *eleemossyna regis*, because first appointed by the king.

ELEEMOSYNARIUS, in old records, the almoner, or officer who received the eleemosynary rents and gifts, and distributed them to charitable uses. See ALMONER.

* ELEEMOSYNARY. *adj.* [*ελεημοσύνων*.] 1. Living upon alms; depending upon charity. Not used.—It is little better than an absurdity, that the cause should be an *eleemosynary* for its subsistence to its effects, as a nature posterior to and dependent on itself. *Glanville's Scepssis*. 2. Given in charity. This is the present use.

(1.) * ELEGANCE. ELEGANCY. *n. f.* [*elegantia*, *Lat.*] 1. Beauty rather soothing than striking; beauty without grandeur; the beauty of propriety not of greatness.—St Augustine, out of a kind of *elegancy* in writings, makes some difference. *Ra-*

leigh's History.—These questions have more propriety, and *elegancy*, understood of the old world. *Burnet*. 2. Any thing that pleases by its nicety. In this sense it has a plural.—My compositions in gardening are altogether Pindarick, and run into the beautiful wildness of nature, without the nicer *elegancies* of art. *Spectator*.

(2.) ELEGANCE, in oratory and composition, an ornament of politeness and agreeableness, with such a choice of rich and happy expressions, as to rise above the common manners, so as to strike people of a delicate taste. It has been observed, that elegance, though irregular, is preferable to regularity without elegance; and that, by being too scrupulous about grammatical construction, we lose certain licences wherein the elegance of language consists. But, on the other hand, it is to be feared, that an affectation of such elegance is in danger of corrupting a language, by introducing ambiguity of expression and other improprieties.

* ELEGANT. *adj.* [*elegans*, *Lat.*] 1. Pleasing by minute beauties.—

Trifles themselves are *elegant* in him. *Pope*.
There may'st thou find some *elegant* retreat.

London.

2. Nice; not coarse; not gross.—

Polite with candour, *elegant* with ease. *Pope*.

* ELEGANTLY. *adv.* [from *elegant*.] 1. In such a manner as to please.—Now read with them those organic arts which enable men to discourse and write periphrastically, *elegantly*, and according to the fittest style of lofty, mean, or lowly. *Milton*.

In a poem *elegantly* writ,

I will not quarrel with a slight mistake. *Roscom*.
2. Neatly; nicely; with minute beauty; with pleasing propriety.—They describe her in part finely and *elegantly*, and in part gravely and sententiously. *Bacon*.—Whoever would write *elegantly*, must have regard to the different turn and juncture of every period: there must be proper distances and pauses. *Pope's Odyssey*, *Notes*.

* ELEGIAK. *adj.* [*elegiacus*, *Lat.*] 1. Used in elegies. 2. Pertaining to elegies. 3. Mournful; sorrowful.—

Let *elegiac* lay the woe relate,

Soft as the breath of distant flutes. *Gay's Trivia*.

ELEGIT, in law, a writ of execution, which lies for a person who has recovered debt or damages; or upon a recognizance in any court, against a defendant who is not able to satisfy the same in his goods.

(1.) * ELEGY. *n. f.* [*elegus*, *Lat.*] 1. A mournful song.—He hangs odes upon hawthorns, and *elegies* upon brambles, all forsooth deifying the name of Rosalind. *Shakesp*. 2. A funeral song.—

So on Meander's banks, when death is nigh,

The mournful swan sings her own *elegy*. *Dryd*.
3. A short poem without points or affected elegancies.

(2.) ELEGY. See POETRY.

(1.) * ELEMENT. *n. f.* [*elementum*, *Latin*.]

1. The first or constituent principle of any thing.—If nature should intermit her course, those principal and mother *elements* of the world, whereof all things in this lower world are made, should lose the qualities which now they have. *Hooker*.—A man may rationally retain doubts concerning the number of those ingredients of bodies, which

some

Some call *elements*, and others principles. *Boyle*.—Simple substances are either spirits, which have no manner of composition, or the first principles of bodies, usually called *elements*, of which other bodies are compounded. *Watts*. 2. The four elements, usually so called, are earth, fire, air, water, of which our world is composed. When it is used alone, *element* commonly means the air.—The king is but a man: the violet smells to him as it doth to me; and the *element* shews to him as it doth to me. *Shakespeare*.—

My dearest sister, fare thee well;
The elements be kind to thee, and make
Thy spirits all of comfort. *Shak. Ant. and Cleop.*

The king,
Contending with the fretful *elements*,
Bids the wind blow the earth into the sea,
Or swell the curled waters. *Shak. King Lear*.
—The heavens and the earth will pass away, and the *elements* melt with fervent heat. 2 *Peter*.—Here be four of you were able to make a good world; for you are as differing as the four *elements*. *Bacon*.
He from his flaming ship his children sent,
To perish in a milder *element*. *Waller*.

3. The proper habitation or sphere of any thing: as water of fish.—We are simple men; we do not know the works by charms, by spells, and such daubry as is beyond our *element*. *Shakespeare*.—
Our torments may, in length of time,
Become our *elements*. *Milton*.
—They shew that they are out of their *element*, and that logick is none of their talent. *Baker on Learning*. 4. An ingredient; a constituent part.

Who set the body and the limbs
Of this great sport together, as you guess?
—One sure that promises no *element*
In such a business. *Shakespeare. Henry VIII.*

5. The letters of any language. 6. The lowest or first rudiments of literature or science.—With religion it fareth as with other sciences; the first delivery of the *elements* thereof must, for like consideration, be framed according to the weak and slender capacity of young beginners. *Hooker*.—Every parish should keep a petty schoolmaster, which should bring up children in the first *elements* of letters. *Spenser*.—We, when we were children, were in bondage under the *elements* of the world. *Gal. iv.* 3.—There is nothing more pernicious to a youth, in the *elements* of painting, than an ignorant master. *Dryden*.

(1.) ELEMENTS, in astronomy, are those principles deduced from astronomical observations and calculations, and those fundamental numbers which are employed in the construction of tables of the planetary motions. Thus, the elements of the theory of the sun, or rather of the earth, are his mean motion and eccentricity, and the motion of the aphelia. The elements of the theory of the moon are its mean motion; that of its node and apogee, its eccentricity, the inclination of its orbit to the plane of the ecliptic, &c.

(3.) ELEMENTS, in physics, the first principles of which all bodies in the system of nature are composed. These are supposed to be few in number, unchangeable, and by their combinations to produce that extensive variety of objects to be met with in the works of nature. There seems to be in reality some foundation for this doctrine;

for there are some principles evidently exempted from every change or decay, but which can be mixed or changed into different forms of matter. A person who surveys the works of nature in an inattentive manner, is apt to form a contrary opinion, when he considers the numerous tribes of fossils, plants, and animals, with the wonderful variety that appears among them in almost every instance. He is thence induced to conclude, that nature employs a vast variety of materials in producing such prodigious diversity. But let him inquire into the origin of this apparent diversity, and he will find that these bodies which seem the most different from each other are at bottom nearly the same. Thus the blood, chyle, milk, urine, &c. as well as the various solid parts of animals are all composed of one particular substance, grass, for instance, by the assistance of air and water, and even sometimes of very insipid kinds of grass. The same simplicity appears in the original composition of the nourishment of vegetables, notwithstanding the variety among them with respect to hardness, softness, elasticity, taste, colour, and medical qualities. They chiefly depend, for these, upon water and the light of the sun; and the same simplicity must take place in animals that are fed on vegetables, as well as in carnivorous animals that feed on them. The analysis of animal substances confirms this hypothesis, for they can all be reduced into a few principles, which are the same in all, and only differ with regard to the proportions in which they are combined. The more we are acquainted with animals, the more reason we have to believe that the variety in their origin is very small. Notwithstanding the infinite variety of natural productions, therefore, it appears, that the materials employed in their production are but few; that these are uniformly and certainly the same, totally exempted from any change or decay; and that the constant and gradual change of one body into another is produced by the various separations and combinations of the original and elementary parts, which is plain from the regularity and uniformity of nature at all times. There is a change of form and combinations through which it passes, and there has been the case from the earliest accounts of time; the productions of nature have always been of the same kind, and succeeded one another in the same order. If we examine an oak, for instance, we find it composed of the same materials with that of any other that has existed from the earliest ages. This regularity and uniformity in the course of nature shows that the elementary parts of bodies are permanent and unchangeable. Reflections of this kind suggested an idea of several principal elements of which all other bodies are composed, which by their various combinations furnished all the variety of natural bodies. Democritus, Aristotle, and other great philosophers of antiquity, fixed the number to four, which have retained the name of elements ever since. These are, fire, air, earth, and water, each of which they imagined was naturally disposed to hold its own place in the universe. Thus, the earth, as heaviest, naturally tended towards the centre, and occupied the lower parts; the water, as approaching next to it in gravity, was

spread chiefly on the outside of the earth; the air, being more subtle and rare, occupied the middle place; while the fire, being still more subtle and active, receded to the greatest distance of all, and was supposed to compose the planets and stars. This system was extended to all the productions of nature. Meteors were produced from a combination of fire and air; animals were considered as composed of earth and water; and those that were warm had likewise a proportion of the element of fire. Thus they went on, explaining some of the most striking qualities of the several productions of nature from the different proportions of the four elements they contained. But though this system appears not at all destitute of beauty and propriety, and on this account has been in some measure received even to the present day, we find reason to doubt whether these four substances be really elementary bodies; nor do they answer our purpose in forming a system, as we know too little of the intimate structure and nature of them to enable us to explain other bodies by them. Other attempts that have been made to assign the number of elementary bodies have been much less fortunate. The chemists, such as Paracelsus at their head, pretend to speak of elementary bodies, salt, sulphur, earth, and mercury: but when we attempt to form an idea of what they mean, we find it very confused; and their expressions concerning them are enveloped in so much obscurity, that they cannot be comprehended. Their theory is built entirely on experiments made on metallic substances. Under the article CHEMISTRY, we have shown, that the elements, whatever they are, must necessarily be invisible or imperceptible by any of our senses. An inquiry into their number or properties, therefore, must be attended with very little profit; and all the knowledge we can have upon this subject must be drawn from a view of their combinations, and reasoning analogically from the combinations we observe to take place in nature. The modern discoveries in aerology have enabled us to proceed farther in this way than it was possible for the ancient philosophers to do. We now find that all the different kinds of air are composed of that invisible and subtle fluid named *heat*, fixed in a certain way with some other substance: in which union the compound acquires the properties of gravitation, expansion, rarefaction, &c. of pure heat, unless when united with some terrestrial substance, neither gravitates nor expands. This is evident from the phenomena of the burning glass, where the light concentrated in the focus will neither heat the air nor water, unless it acts with something with which it can form a permanent union. Heat therefore is justly to be considered as one of the original elements; being always capable of uniting with bodies, and of being extricated from them unchanged; while the other bodies are by their union with it changed into various forms; water, for instance, into vapour or ice, both of which return into their original state by the abstraction or addition of heat in certain degrees. Hence it is natural to conclude, that there are only two elements in the universe: of this opinion we find adopted by several philosophers, particularly the Count de Tressan in his

essay on the Electric Fluid. According to this doctrine, two primitive material substances seem to exist in nature; one that incessantly acts, and to which it is essential to be in motion; the other absolutely passive, and whose nature it is to be inert, and move entirely as directed by the former. Should this doctrine be adopted, little difficulty would occur in determining the active matter to be that universal fluid which in its various modifications of light, fire, and electricity, has such a share in the operations of nature. See ELECTRICITY, *Index*. But in fixing on the passive element we are greatly embarrassed; nor are the discoveries in aerology or any other science as yet able to remove the difficulty entirely. In our experiments on this and some other parts of chemistry, we find three things that seem to be unchangeable, viz. earth; carbone, or charcoal; and that invisible, though terrestrial and gravitating principle, called by the antiphlogistians the *exigenous* or acidifying principle, and by the phlogistians the basis of dephlogisticated air. In our experiments on the first, we find that earth, though vitrified by the most intense fire, may be recovered in its proper form; and some very pure earths, particularly magnesia alba, cannot be changed even in the focus of the most powerful mirror. In like manner we may dissipate charcoal *in vacuo* by the solar rays, and the compound is hydrogenous gas; we may decompose this compound by a metallic calx, and we have our charcoal again unchanged, for all metals contain charcoal in substance. Let us try to destroy it by common fire, and we have it then in the fixed air produced, from which it may be recovered unchanged by the electric spark. With the basis of oxigenous gas, the case is still more difficult; for we cannot by any means procure a sight of it by itself. We may combine it with heat, and we have oxigenous gas; to the compound we may add charcoal, and we have azotic gas, or fixed air; by decomposing the former by burning iron in it, we have the metal greatly increased in weight by some unknown substance; and if we attempt to separate the latter, we have water, or some kind of vapour, which still conceals it from our view. With regard to the basis of oxigene, therefore, no experiment has ever shown that it can either be procured by itself, or changed into any other substance; so that it appears to have the nature of an element as much as light or heat. Though we should therefore be inclined to divide the whole matter of the universe into two classes, the one active and the other acted upon, we must allow that the passive matter even on this earth is not precisely of the same kind: much less can we extend our speculations in this respect to the celestial regions; for who can determine whether the substance of the moon is the same with that of our earth, or that the elements of Jupiter are the same with those of Saturn? There is even a difficulty with regard to the division which seems so well established, viz. of matter in general into active and passive; for no person can prove, that the matter which is active in one case may not be passive in another, and occasionally resume its activity. Something like this certainly happens in the case of the electric fluid, which is modified into heat or light, accord-

ing to different circumstances; and we cannot be absolutely certain, but it is the very same substance that constitutes the most solid bodies. This opinion at least did not seem absurd to Sir Isaac Newton, who proposed it as a query, Whether gross bodies and light were not convertible into one another? The end of our inquiries on this subject therefore must be, That the universe may be composed of many elements, or of one element; and of the nature of these elements, or of the single one, we know nothing.

* To ELEMENT. *v. a.* [from the noun.] 1. To compound of elements.—Whether any one such body be met with, in those said to be *elemented* bodies, I now question. *Boyle.* 2. To constitute; to make as a first principle.—

Dull sublunary lover's love,
Whose soul is sense, cannot admit
Of absence, 'cause it doth remove

The thing which *elemented* it. *Dante.*

* ELEMENTAL. *adj.* [from *element*.] 1. Produced by some of the four elements.—

If dusky spots are vary'd on his brow,
And streak'd with red, a trowl'd colour show;
That tullen mixture shall at once declare
Winds, rain, and storms, and *elemental* war.

Dryden's Virgil.

Soft yielding minds to water glide away,
And sip with nymphs, their *elemental* tea. *Pope.*

2. Arising from first principles.—Leeches are by some accounted poison, not properly, that is by temperamental contrariety, occult form, or so much as *elemental* repugnancy; but inwardly taken, they fasten upon the veins, and occasion an effusion of blood. *Brown.*

* ELEMENTARITY. *n. f.* [from *elementary*.] Containing the rudiments or first principles; simplicity of nature; absence of composition; Being uncompounded.—A very large class of creatures in the earth, far above the condition of *elementarity*. *Brown's Vulgar Errors.*

* ELEMENTARY. *adj.* [from *element*.] 1. Uncompounded; having only one principle or constituent part.—All rain water contains in it a copious sediment of terrestrial matter, and is not a simple elementary water. *Ray.*—The *elementary* salts of animals are not the same as they appear by distillation. *Arbuth. on Alim.* 2. Initial; rude.

ELEMERE, a village in Yorkshire N. Riding.

(1.) * ELEMI. *n. f.* This drug is improperly called gum *elemi*, being a resin. The genuine *elemi* is brought from *Aethiopia* in stastiff masses, or in cylinders, of a yellowish colour. It is very rare in Europe, and supposed to be produced by a tree of the olive kind. The spurious or American *elemi*, almost the only kind known, is of a whitish colour, with the greater or less tinge of a greenish or yellowish. It proceeds from a tall tree, which the *Brazilians* wound, and collect the resin. *Hill's Mat-ria Medica.*

(2.) * ELEMI, or } in the *mat-ria medica*. See

ELEMY, } *AMYRIS*, § 2, 5.

ELEN, a river of Ireland, in Down county.

* ELENBOROUGH, a town of Ireland, in Down county, at the mouth of the Elen.

* ELENCH. *n. f.* [*elenchus*, Lat.] An argument; a sophism.—The first delusion Satan put upon Eve, and his whole temptation might be the same *elench*

continued, as when he said, Ye shall not die; that was, in his equivocation, you shall not incur present death. *Brown's Vulg. Errors.*—Discover the fallacies of our common adversary, that old sophister, who puts the most abusive *elenchs* on us. *Decay of Piety.*

(1.) ELENCHUS, in antiquity, a kind of earrings set with large pearls.

(2.) ELENCHUS, in logic, by the Latins called *argumentum* and *inquisitio*, is a vicious or fallacious argument, which deceives under the appearance of a truth; the same with what is otherwise called *sophism*. See ELENCH.

ELENHALL, a village in Staffordshire.

ELENT, a town of Germany, in Austria, 6 miles NNW. of Brugg.

* ELEOTS. *n. f.* Some name the apples in request in the cyder countries so; not known by that name in several parts of England. *Mortimer's Husbandry.*

(1.) * ELEPHANT. *n. f.* [*elephas*, Lat.] 1. The largest of all quadrupeds, of whose sagacity, faithfulness, prudence, and even understanding, many surprising relations are given. This animal feeds on hay, herbs, and all sorts of pulse; and it is said to be extremely long-lived. He is supplied with a trunk, or long hollow cartilage, which hangs between his teeth, and serves him for hands. His teeth are the ivory. *Catmet.*—

He loves to hear,

That unicorns may be betray'd with trees,
And bears with glasses, *elephants* with holes.

Shakspere

The *elephant* hath joints, but not for courtesy.
His legs are for necessity, not flexure. *Shakspere*

2. Ivory; the teeth of elephants.—

High o'er the gate, in *elephant* and gold,
The crowd shall Cæsar's Indian war behold.

Dryden's Virg.

(2.) ELEPHANT, in zoology. See ELEPHANT. The elephant is not only the most tractable, but the most intelligent, of quadrupeds; although his brain is small in proportion to his bulk. He is sensible of benefits, resentful of injuries, and endowed even with a sense of glory. In India, they were formerly employed in the launching of ships, one was directed to force a very large vessel out of the water; the work proved superior to his strength: his master, with a sarcastic tone, the keeper take away this lazy beast and bring me another: the poor animal instantly repeated his efforts, fractured his skull, and died on the spot. In Delli, an elephant passing along the streets, put his trunk into a taylor's shop, where several people were at work: one of them pricked the elephant with his needle: the beast passed on; but put his trunk in the next dirty puddle with water, and turned to the shop, and spouting every drop among the people who had offended him, spoiled their work. An elephant in Adameer, which often passed through the market, as he went by a certain herb woman, always received from her a mouthful of greens: at length he was seized with one of his periodical fits of rage, broke his fetters, and, running through the market, put the crowd to flight; among others, this woman, who in haste forgot a little child she had brought with her, the animal recollecting the spot where his benefactor

was wont to sit, took up the infant gently in his trunk, and placed it in safety on a stall before a neighbouring house. Another, in his madness, killed his cornac: the wife seeing the misfortune, took her two children and flung them before the elephant, saying, "Now you have destroyed their father, you may as well put an end to their lives and mine." It instantly stopped, relented, took the greatest of the children, placed him on his neck, adopted him for his cornac, and never afterwards would permit any body else to mount it. A soldier at Pondicherry, who was accustomed, whenever he received the portion that came to his share, to carry a certain quantity of it to one of these animals, having one day drank too freely, and finding himself pursued by the guards, who were going to take him to prison, took refuge under the elephant's body and fell asleep. In vain did the guard try to force him from this asylum, the elephant protected him. The next morning the soldier, recovering from his drunken fit, staggered with horror to find himself stretched under the belly of this huge animal. The elephant perceived the man's embarrassment, and caressed him with his trunk, to inspire him with courage, and make him understand that he might now depart in safety. A painter was desirous of drawing the elephant which was kept in the menagerie at Versailles in an uncommon attitude, which was that of holding his trunk raised up in the air with his mouth open. The painter's boy, in order to keep the animal in this posture, threw fruit into his mouth; but as the lad frequently deceived him, and made an offer only of throwing him the bait, he grew angry; and, as if he had known that the painter's intention of drawing him was the cause of the affront, instead of revenging himself on the lad, he turned his resentment on the master, and taking up a quantity of water in his trunk, threw it on the paper on which the painter was drawing, and spoiled it. At the Cape of Good Hope, it is customary to kill these animals, for the sake of their teeth, by the chase. Three horsemen, well mounted and armed with lances, attack the elephant alternately, each relieving the other as they see their companion pressed, till the beast is subdued. Three Dutchmen, brothers, who had made large fortunes by this business, determined to retire to Europe, and enjoy the fruits of their labours; but resolved, before they went, to have a last chase by way of amusement: they met with their game, and began the attack in the usual manner; but unfortunately one of their horses fell and flung his rider: the enraged animal instantly seized the unhappy man with its trunk, flung him up to a vast height in the air, and received him on one of his tusks; then turning towards the two other brethren, as if with an aspect of revenge and insult, held out to them the impaled wretch writhing on the bloody tooth. From the earliest accounts in history, the eastern nations have employed elephants in war; Alexander the Great was the first European who ever mounted an elephant. He carried a number of them into Greece, which Pyrrhus employed some years after against the Romans at the battle of Tarentum. Both the Greeks and Romans soon learnt to get the better of those monstrous animals; they open-

ed their ranks and allowed them to pass through; neither did they attempt to hurt them, but threw darts, &c. at their guides. Now that fire arms are the principal instruments of war, elephants, who are terrified at the noise and flame, instead of being useful, would only embarrass and confuse an army. However, in Cochin and other parts of Malabar, and in Tonquin, Siam, and Pegu, where fire arms are little understood, they are still used in battle. The guide sits astride upon the neck, and the combatants sit or stand upon the other parts of the body. They are also extremely serviceable in fording rivers, and carrying over the baggage on their backs. After the keepers have loaded them with several hundred weight, they fasten ropes to them; of which the soldiers taking hold, either swim or are drawn across the river. In time of action, they now and then fix a heavy iron chain to the end of their trunks, which they whirl round with such agility, as to make it impossible for an enemy to approach them at that time. Another use they still have for this creature in war, is to force open the gates of a city or garrison which is closely besieged. This he does by setting his backside against them, wriggling backwards and forwards with his whole weight, till he has burst the bars, and forced an entrance: to prevent which, most of the garrisons in this country have large spikes stuck in their gates, that project to a considerable distance. After all, those prodigious animals are kept more for show and grandeur than for use, and their keeping is attended with a very great expence; for they devour vast quantities of provision, and must sometimes be regaled with a plentiful repast of cinnamon, of which they are exceedingly fond. It is said to be no uncommon thing with a Nabob, if he has a mind to ruin a private gentleman, to make him a present of an elephant; which he is ever afterwards obliged to maintain at a greater expence than he can afford: by parting with it, he would certainly fall under the displeasure of the grandee, besides forfeiting all the honour which his countrymen think is conferred upon him by so respectable a present.

(3.) ELEPHANT, AMERICAN. See MAMMOTH.

(4.) ELEPHANT BEETLE. See SCABAEUS.

(5.) ELEPHANT HOG. See TAPIR.

(6.) ELEPHANT, KNIGHTS OF THE, an order of knighthood in Denmark, conferred upon none but persons of the first quality and merit. It is also called the *order of St. Mary*. Its institution is said to have been owing to a gentleman among the Danish croises having killed an elephant, in an expedition against the Saracens, in 1184; in memory of which, king Canute instituted this order, the badge of which is a towered elephant, with an image of the holy virgin encircled with rays, and hung on a watered sky-coloured ribbon, like the George in England.

ELEPHANTA, a small but very remarkable island on the W. coast of Indostan, 5 miles from Bombay. Of this we have the following description in Mr Grose's Voyage to the East Indies. "It can at most be but about 3 miles in compass, and consists of almost all hill: at the foot of which, as you land, you see, just above the shore, on your right, an elephant, coarsely cut out in stone, of the natural bigness, and at some little distance not

impossible to be taken for a real elephant, from the stone being naturally of the colour of that beast. It stands on a platform of stones of the same colour. On the back of this animal was placed, standing, another young one, appearing to have been all of the same stone, but it has been long broken down. Of the meaning, or history, of this image, there is no tradition old enough to give any account. Returning then to the foot of the hill, you ascend an easy flant, which, about half way up the hill, brings you to the opening or portal of a large cavern hewn out of a solid rock, into a magnificent temple: for such surely it may be termed, considering the immense workmanship of such an excavation; and it seems to me a far more bold attempt than that of the pyramids of Egypt. There is a fair entrance into this subterraneous temple, which is an oblong square, in length about 80 or 90 feet, by 40 broad. The roof is nothing but the rock cut flat at top, and in which I could not discern any thing that did not show it to be all of one piece. It is about 20 feet high, and supported towards the middle, at equidistance from the sides and from one another, with two regular rows of pillars of a singular order. They are very massive, short in proportion to their thickness, and their capital bears some resemblance to a round cushion pressed by the superincumbent mountain, with which they are also of one piece. At the further end of this temple are three gigantic figures; the face of one of them is at least 5 feet in length; and of a proportionable breadth. But these representations have no reference or connection, either to any known history, or the mythology of the Gentoos. They had continued in a tolerable state of preservation and wholeness, considering the remoteness of their antiquity, until the arrival of the Portuguese, who made themselves masters of the place; and in the blind fury of their bigotry, not suffering any idols but their own, they must have even been at some pains to maim and deface them, as they now remain, considering the hardness of the stone. It is said that they even brought field-pieces to the demolition of images, which so greatly deserved to be spared for the unequalled curiosity of them. Of this Queen Catherine of Portugal was so sensible, that she could not conceive that any traveller would return from that side of India without visiting the wonders of this cavern; of which too the sight appeared to me to exceed all the descriptions I had heard of them. About two thirds of the way up this temple, on each side, and fronting each other, are two doors or outlets into smaller grots or excavations, and freely open to the air. Near and about the door-way on the right hand, are several mutilated images, single and in groupes. In one of the last I remarked a kind of resemblance to the story of Solomon dividing the child, there finding a figure with a drawn sword, holding in one hand an infant with the head downwards, which it appears in the act to cleave through the middle. The outlet of the other on the left hand is into an area of about 20 feet in length and 12 in breadth; at the upper end of which, as you turn to the right, presents itself a colonnade covered at top, of 10 or 12 feet deep, and in length answering to the breadth of the area; this joins to

an apartment of the most regular architecture, an oblong square, with a door in perfect symmetry; and the whole executed in a quite contrary taste and manner from any of the oldest or best Gento buildings any where extant. I took particular notice of some paintings round the cornice, not for any thing curious in the design, but for the beauty and freshness of the colouring, which must have lasted some thousands of years, on supposing it, as there is all reason to suppose it, contemporaneous with the building itself. The floor of the apartment is generally full of water, its pavement or ground-work not permitting it to be drawn off or to be soaked up. For it is to be observed, that even the cavern itself is not visitable after the rains, until the ground of it has had time to dry into a competent hardness." This island was ceded to Britain by the Mahrattas.

(1.) * **ELEPHANTIASIS** *n. f.* [*elephantiasis*, Lat.] A species of leprosy, so called from covering the skin with incrustations like those on the hide of an elephant.

(2.) **ELEPHANTIASIS**, the **LEPRA OF THE ARABIAN**, in medicine, a chronical disease, one of the two species of leprosy which affects the whole body, where even the bones as well as the skin are covered with spots and tumours, which being red at last turn black. See **MEDICINE**.

Index.
(1.) * **ELEPHANTINE**. *adj.* [*elephantinus*, Lat.] Pertaining to the elephant.

(2.) **ELEPHANTINE**, in Roman antiquity, an appellation given to the books wherein were registered the transactions of the senate and magistrates of Rome, of the emperors or generals of armies, and even of the provincial magistrates; the births and classes of the people, and other things relating to the census. They are supposed to have been so called, from the leaves being made of ivory or elephants tusks.

(3.) **ELEPHANTINE**, or **ELERPHANTIS**, in ancient geography, an island in the Nile, S. of Syene, where the navigation of the Nile ends below the last cataract.

(4.) **ELEPHANTINE**, or } a town in the above
ELERPHANTIS, } island, where, to the
W. of the Nile, stood the last Roman garrison.
Notitia Imperii.

ELEPHANTOPHAGI, an ancient people of Ethiopia, who are said to have fed on elephants flesh. See **ETHIOPIA**.

ELEPHANTOPUS, in botany: A genus of the polygamia segregata order, belonging to the syngenesia class of plants; and in the natural method ranking under the 49th order, *Compositæ*. The calyculus is quadriflorus, with hermaphrodite florets ligulated or plane; the receptacle naked; the pappus bristly.

ELEPHAS, the **ELEPHANT**, in zoology, a genus of quadrupeds belonging to the order of bruta. The characters, as defined by Linnaeus and Gmelin, are these: He "has no fore teeth in either jaw, and no tusks in the lower jaw; the tusks of the upper jaw are very long, and stretch far out of the mouth: has a long, extensible, and flexible, cartilaginous trunk, or proboscis, on the nose, which is capable of laying hold even of very minute objects. The body is almost naked." See *Plat.*

Fig. 1.
Elephas.

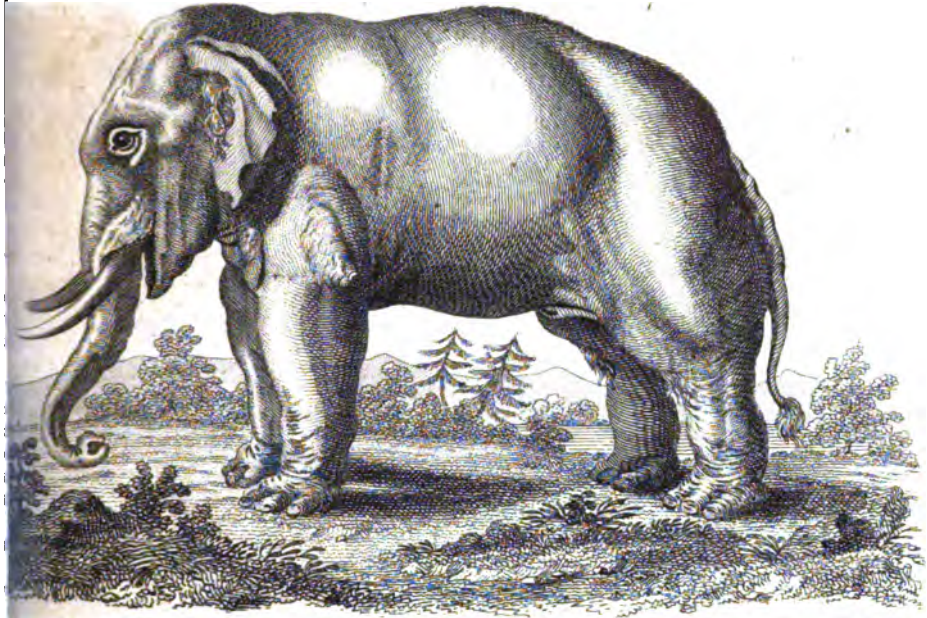


Fig. 2. *Emberiza.*
Black-throated Bunting.



Fig. 3.
Emberiza
Cinereous Bunting.



Fig. 4.
Empis.



Plate CXXXV. fig. 1. There is only one known species, called by way of distinction from the American elephant, which is quite a different genus,

Elephas maximus, or the GREAT ELEPHANT. It is the largest of all land animals. From the root to the origin of the tail he is generally about 8 feet long, from the end of the trunk 25 feet, and about 14 feet high. The circumference of the neck is 17 feet, and the circumference of the body at the grossest part 25 feet 10 inches; the tail is about 6 feet long, and $2\frac{1}{2}$ in circumference. The circumference of the legs is about 6 feet. These are the largest dimensions. But the animal varies in size in different countries; in some not exceeding 7 feet in height. The eyes are small in proportion to the size of the head. The muzzle very different from that of any other quadruped: it is nothing but the origin of a long trunk which hangs between the two large tusks; the mouth appears behind the trunk, which serves in place of an upper lip, and the under lip terminates in a point. The feet are short, round, fleshy, and only distinguishable by the toes. The trunk is, properly speaking, the nose extended, and terminated by a couple of nostrils. But, besides serving as an organ of smell, the trunk performs all the functions of a strong and dexterous arm. The trunk of an elephant is about 8 feet long, $5\frac{1}{2}$ feet in circumference near the mouth, one foot and a half near the extremity: it is the shape of an irregular conical figure, and widened at the end: the superior side of the trunk is convex, and furrowed transversely; and the inferior is flat, and has two longitudinal rows of small protuberances resembling the tentacula of the silk worm and most other caterpillars. The upper part of the trunk corresponds with the extremity of the trunk in other quadrupeds, and answers the same function; the inferior part serves as an upper lip, shutting the nostrils at the same time. For the trunk is a continued canal, divided into two cavities by a longitudinal partition; these cavities lead along the forepart of the upper jaw, where they make a turn inward, and descend into the throat, terminating in two separate orifices; they are likewise each a separate orifice at the end of a trunk. At the place where these cavities make a turn, and before they enter into the bones of the head, there is a moveable cartilaginous plate situated in such a manner as enables the animal to shut the canal, and to prevent the water which it occasionally fills the trunk from entering into the passage of the nose where the organs serving for the sensation of smell are placed. The elephant can move the trunk in all directions; it can extend or shorten it at pleasure, without altering the diameters of the two canals within. This means respiration is not interrupted, whatever be the situation of the trunk; and the water is allowed to remain till the animal chooses to throw it out by an expiration. Each canal is lined with a smooth strong membrane, and the surface of the trunk is covered with another strong membrane or skin. The substance contained between the exterior and interior membranes, is a composition of longitudinal and transverse muscles, which serve to extend and contract the length of the trunk. At the extremity of the trunk there

is a concave protuberance, in the bottom of which are the two passages of the nostrils. The inferior part of the protuberance is thicker than the sides, and the superior part is stretched out like a finger about five inches long; which, together with the edges of the whole extremity of the trunk, takes on different figures according to the necessities of the animal. It is by this organ that the animal lays hold of food or other substances; which he manages with as much dexterity as a man does his hand, taking up grains of corn, or the smallest piles of grass, and conveying them to his mouth. When he drinks, he thrusts his trunk into the water, and fills it by drawing in his breath and exhaling the air: when the trunk is thus filled with water, he can either throw it out to a great distance, or drink it by putting the end of the trunk in his mouth. The two large tusks, which some call the *borns* of the elephant, are of a yellowish colour, and extremely hard. The bony substance of which they are composed is known by the name of *Ivory*, and much used in different branches of manufacture. The ears are very large, and resemble those of an ape. The skin of the elephant has but few hairs on it, placed at great distances from each other. It is full of wrinkles, like those on the palm of a man's hand, besides many chapped and greasy ridges. The female has two dugs, one on each side of the breast. M. Buffon supposed the ancients to have been "deceived, when they tell us, that the elephants copulate like other quadrupeds, the female only lowering her crupper for the more easy reception of the male. The situation of the parts seems to render this mode of junction impossible. The female elephant has not like other quadrupeds the orifice of the vagina adjacent to the anus; for it is situated nearly in the middle of the belly, about two and a half or three feet distant from the anus. On the other hand, the male organ is by no means proportioned to the magnitude of his body, nor to so long an interval, which in the situation supposed would preclude the practicability of his approach. Naturalists as well as travellers agree in affirming, that the male organ of the elephant exceeds not either in length or diameter that of a horse. It is, therefore, impossible that he should attain his end in the ordinary position of quadrupeds. The female must necessarily lie on her back. De Feynes and Tavernier positively assert, and the situation of the part confirms their evidence, that these animals cannot intermix in any other manner. They require, therefore, more time and convenience for this operation than other quadrupeds; and it is perhaps for this reason that they never copulate but when they enjoy full liberty, and have every necessary article at their command. The female must not only consent, but solicit the male, by a position which she never assumes unless when she thinks herself in perfect retirement." The fact, however, has been controverted by others. Dr Sparrman informs us, that in order if possible to determine the question, he let slip no opportunity of interrogating on the subject every elephant hunter he met with at the Cape; who all agreed in replying that they were most inclined to the common opinion, if they had not been differently informed by

two of their companions, Jacob Kok and Marcus Potgieter, who had actually seen elephants copulate. "I met (says our author) only with the former of these hunters, who told me he had likewise himself been of opinion that the female was obliged to lie on her back on this occasion; till at length, being out along with Potgieter hunting of elephants, he had occasion to think otherwise. On a certain spot they came to, they could reckon about 8 elephants, which, on account of the small size of their tusks, they took for females, excepting two large ones; which, making several circles round one of those that they took for females (the only one perhaps in rut) frequently, in all probability by way of caressing her, struck her with their trunks, till at length she threw herself down upon her knees, and keeping the spine of her back in a stiff and extended position, brought her hind feet quite close to her fore feet, or somewhat beyond them; so that she almost as it were stood upon her head. In this forced posture they saw her wait a long while together for the carresses of the males, who, in fact, likewise endeavoured to perform the matrimonial rites, but from jealousy hindered each other whenever either of them began to mount. After two hours had thus elapsed, the patience of our hunters began to tire; and the rather, because on account of the uneven and stoney nature of the ground, which, however, had no wood upon it, and of a river being between them, they could not dare to advance and fire at these animals. I will not dissemble, that though I have not the least occasion to doubt the veracity of my informer, and though what he told me is by no means impossible, I yet find great difficulty in this matter. But on the other hand, the same may be said of M. Buffon's or the common opinion; first, as they have not been able to confirm it by the testimony of any eye-witness, not even by any instance of this kind in other quadrupeds properly so called; that is, in such animals as have some degree of affinity with elephants; secondly, as the female's lying on her back can hardly be more convenient for the male, especially as the vagina, according to what I am told, goes from the fore-part backwards; thirdly, it is besides well known, that the older elephants, on account of the unwieldiness of their bodies, chiefly stand when they sleep, in order to avoid the trouble and difficulty of lying down, and getting up again. Tavernier, indeed, in his 3d volume, informs us, that the tame females when in rut make themselves a kind of bed, and lay themselves in it on their backs, at the same time inviting the male elephant by a peculiar cry, &c. but as the author did not see this himself, and that besides it is entirely contrary to the modesty and dislike to copulation for which the female elephants have always been remarked, I cannot do otherwise than leave M. Tavernier's relation and different opinions touching the subject to the test of future experience." Mr J. C. Wolf, however, in his Voyage to Ceylon lately published, confirms the common opinion, and gives an account of the operation in question as if he had more than once seen it performed. "The male (he informs us) makes a pit or hollow in the ground, and he assists his

consort to lay herself on her back; and in case he finds her perfectly compliant and agreeable, very complaisantly helps her up again after the business is finished (for she cannot possibly rise of herself,) by throwing his trunk round her neck: but if she at first stood shilly-shally, and gave herself prudish airs, he then even lets her lie, and goes about his business." But concerning the credit due to the author, the public seem not to be agreed. On the other hand, M. Buffon, in his Supplement, has retracted his former opinion, upon the authority of M. Bles (secretary during 12 years to the Dutch government in Ceylon); who describes the copulation of these animals in the same manner. Farmer Kok does in the extract above given from Dr Sparrman. "Having perceived (says M. Bles) that the Count de Buffon, in his excellent work is deceived with regard to the copulation of the elephants, I know, that in several parts of Asia and Africa these animals, especially during the season of love, remain always in the most inaccessible places of the forests; but in the island of Ceylon, where I lived 12 years, the land being everywhere inhabited, they cannot so easily conceal themselves; and having often examined them, I perceived that the female organ is situated near under the middle of the belly, which would lead us to think, with M. Buffon, that the males could not cover the females in the manner of other quadrupeds. However, there is only a slight difference of situation. When they inclined to copulate, I perceived that the female bowed down her head and neck, and leaned her two fore legs, which were also bended, upon the root of a tree, as if she meant to prostrate herself on the ground, and the two hind legs remained erect, which gave the male an opportunity of embracing her as other quadrupeds do. I can likewise affirm, that the females go with young about nine months. Moreover, the elephants never copulate unless when in a state of freedom. In the season of love, the males are strongly chained for four or five weeks during which time they discharge vast quantities of semen, and are so furious, that their cornacks or governors cannot come near them without danger. The approach of the rutting season is easily known; for some days before it happens an oily liquor flows from a small hole on each side of the head. The domestic female on these occasions sometimes makes her escape, and joins the wild males in the woods. Some days afterwards her cornack goes in quest of her, and calls her by her name till she comes. She submits to him with complacence, and allows herself to be conducted home, and shut up in the stable. It was from cases of this kind that it was discovered that the females bring forth about the end of nine months."—The first remark, with regard to the mode of copulating, M. Buffon thinks unquestionable, since M. Marcel Bles assures us that he has seen the elephants perform the operation. But as to the time of gestation, which he limits to 9 months, we ought to suspend our judgment, because all travellers affirm that the female elephant is believed to go with young no less than two years. Elephants, even in a savage state, are peaceable and gentle creatures. They never use their weapons but in defence of themselves or

their companions. Their social dispositions are so strong, that they are seldom found alone, but march always in large troops: the oldest and most experienced lead the van; the young and the lame keep in the middle; and those of the middle age, walk in the rear. The females carry their young on their tusks, embracing them at the same time with their trunk. They seldom march in this regular order but when they reckon the journey dangerous, such as an expedition to cultivated lands, where they expect to meet with resistance. On other occasions they are less cautious; some of them falling behind or separating from the rest, it seldom so far as to be beyond the reach of assistance from their companions. It is dangerous to offer them the least injury; for they run straight on the offender; and although the weight of their body be great, their steps are so large, that they easily outrun the swiftest man, whom they pierce with their tusks, or seize with their trunk, dart him in the air, and then trample him under their feet. But they never attack any person unless when provoked. However, as they are extremely delicate with regard to injuries, it is very prudent to keep out of their way. Travellers who frequent these countries kindle large fires, and beat drums during the night, to prevent their approach. After being once attacked, men, or falling into any ambush, they never get the injury, but search for every opportunity of revenge. As they are probably endowed with a more exquisite sensation of smell than any other animal, owing to the great extent of their trunk, they can scent a man at a very great distance, and trace him by his footsteps. Elephants are peculiarly fond of the banks of rivers, deep meadows, and marshy grounds, especially when well shaded with trees. They delight in drawing up water into their trunks, even when they do not drink it, and amuse themselves in dashing it around. They cannot endure cold, and are equally averse to heat. To avoid the scorching heat of the sun, they retire to the thickest and most shady parts of the forest. The bulk of their bodies is so enormous, that they do not choose to wade into deep waters so frequently as some other quadrupeds; although the length of their trunk, which they can raise straight up to respire, is a great advantage in swimming. Their ordinary food is roots, herbs, leaves, the tender branches of trees, fruits, and grains: but they abhor flesh and fish. When any of them discovers a fine pasture, he immediately calls his companions to come and eat with him. As they devour a large quantity of food in a short time, they often shift their pasture; when they meet with cultivated grounds, they make a prodigious desolation, and destroy more plants by their feet than they use for nourishment: which last is very considerable, amounting to 150 pounds of herbage every day: by this means, as they constantly graze in large troops, they lay waste whole fields in an hour. The Indians and negroes employ every art to prevent them from visiting their cultivated lands, making great noises, and burning large fires round their fields. However, these precautions are not always sufficient to prevent the elephants from visiting them. They chase away the domest-

tic animals, put the men to flight, and sometimes even throw down their limber huts. Elephants are hardly susceptible of fear: the only method to stop their course is by fires, squibs, and crackers, the effects of which being sudden and quickly repeated, the elephants frequently turn back; and when one runs, all the rest instantly follow him. Although the social disposition in the elephant be exceeding strong; yet whenever the females come in season, it immediately gives place to the stronger and more interesting passion of love. They observe the greatest delicacy in their amours, abhorring nothing so much as to be seen by their companions. The troop divide themselves into couples, steal off into the most secret places of the forest, and then give way to all the impulses of nature, which are lively and lasting in proportion to the long period of abstinence; for, according to all accounts, except that of M. Bles already noticed, (which is adopted by Mr Pennant,) the female goes with young two years, and it is only once in 3 years that the season of love returns. They bring forth but one at a time; which, on coming into the world, is as large as a wild boar, and is furnished with teeth: however, the large tusks do not make their appearance till some time after, and at the age of six months they are several inches long. Elephants of this age are as large as an ox in a natural state. The elephant, when tamed, is the most friendly and obedient of all animals: he is entirely attached to the person who feeds and takes care of him. In a short time he understands signs, and the sound of his master's voice. He distinguishes the language of passion, of command, of satisfaction; and acts accordingly. He receives his orders with attention, and executes them with alacrity, but without precipitation. He easily learns to bow his knees and lower his body, for the convenience of those who mount him. He caresses his friends with his trunk. He lifts burdens with his trunk, and assists those who are loading him in laying them on his back. He delights in shining harness and trappings. When yoked in a cart or waggon, he pulls equally and cheerfully, unless he be abused by injudicious chastisements. His guide is generally mounted on his neck, with a small rod of iron sharp at the point in his hand; he directs his motion by pricking him on the ears and head; but for the most part, a word is sufficient. A tame elephant will do more labour than six horses, but he requires a proportional quantity of food. They are the principal beasts of burden in many parts of Africa and the East Indies. They carry sacks and bundles of all kinds on their necks, backs, and tusks. They never lose or damage any thing committed to their care: they will stand on the edge of a river, take bundles off their necks and tusks, lay them carefully in a boat wherever they are desired, and try with their trunk whether they are properly situated; if they be loaded with casks, they go in quest of stones to prop them and prevent them from rolling. When the elephant is properly managed, he lives very long even in a state of slavery and labour. That some have lived in this state 130 years, is pretty well authenticated. In a natural state, they often exceed 200 years, and propagate their species till they are 120: It is 30 years

years before they come to their full growth. The elephants inhabit India, and some of its greater Islands, Cochín China, and some of the provinces of China. They abound in the southern parts of Africa, from the river Senegal to the Cape; and from thence as high as Ethiopia on the other side. They are found in the greatest numbers in the interior parts, where there are vast forests, near the sides of rivers. The wild elephants of Ceylon live in troops or families distinct and separate from all others, and seem to avoid the strange herds with peculiar care. When a family removes from place to place, the largest-tusked males put themselves at the head; and if they meet with a large river, are the first to pass it. On arriving on the opposite bank, they try whether the landing place is safe: if it be, they give a signal of a note from the trunk, as if it were the sound of a trumpet, on which the remaining part of the old elephants swim over; the little elephants follow, holding one another by locking their trunks together; and the rest of the old ones bring up the rear. In the woods is often seen a solitary male elephant, wandering like an outlaw banished from the herd and all the race. In this solitary state, as if in a state of desperation, they are very dangerous. A single man will put to flight whole herds of social elephants: the solitary one fears not his presence, but will stand firm, putting his power to defiance. Elephants are not domesticated in Africa, as in the more civilized parts of Asia, although they are much more numerous. In some parts of Africa they swarm so, that the negroes are obliged to make their habitations underground for fear of them. They are killed and eaten by the natives, and the trunk is said to be a delicious morsel. All the teeth are brought from Africa; they are frequently picked up in the woods; so that it is uncertain whether they are shed teeth, or those of dead elephants. The African teeth which come from Mosambique are ten feet long; those of Malabar only 3 or 4; the largest in Asia are those of Cochín China, which even exceed the size of the elephants of Mosambique. They are often so large as to weigh 150 lb. each. The skin is thick, and, when dressed, proof against a musket ball. The flesh, the gall, the skin, and the bones, are said to be used medicinally by the Chinese. Mr Kerr says some elephants have been found so large as to weigh 4,500 lb.

* **ELEVATE.** *part. adj.* [from *elevated*.] Exalted; raised aloft.—

On each side an imperial city stood,
With tow'rs and temples proudly *elevate*

On seven small hills. *Milton.*

* **ELEVATE.** *v. a.* [*elevo*, Lat.] 1. To raise up aloft.—This subterranean heat or fire, which *elevates* the water out of the abyss. *Woodward.* 2. To exalt; to dignify. 3. To raise with great conceptions.—

Others apart sat on a hill retired,
In thoughts more *elevate*, and reason'd high
Of providence, foreknowledge, will, and fate.

Milton.

—In all that great extent, wherein the mind wanders, in those remote speculations it may seem to be *elevated* with, it stirs not beyond sense or reflection. *Locke.*—

Now rising fortune *elevates* his mind,
He shines unclouded, and adorns mankind.

Sevage.

4. To elate with vicious pride.—

To mischief swift, hope *elevates*, and joy
Brightens his crest. *Milton.*

5. To lessen by deduction. This sense, though legitimately deduced from the Latin, is not now in use.—When the judgments of learned men are alleged against you, what do they but either *elevate* their credit, or oppose unto them the judgments of others as learned? *Hooker.*

(1.) * **ELEVATION.** *n. f.* [*elevatio*, Latin.]

1. The act of raising aloft.—The disruption of the strata, the *elevation* of some, and depression of others, did not fall out by chance, but were directed by a discerning principle. *Woodward.* 2. Exaltation; dignity.—Angels, in their several degrees of *elevation* above us, may be endowed with more comprehensive faculties. *Locke.* 3. Exaltation of the mind by noble conceptions.—We are therefore to love him with all possible application and *elevation* of spirit, with all the heart, soul and mind. *Norris.* 4. Exaltation of style.—His style was an elegant perspicuity, rich of phrase, but seldom any bold metaphors; and so far from the mid, that it rather wanted a little *elevation*. *Wotton.* 5. Attention to objects above us.—All which different *elevations* of spirit unto God, are contained in the name of prayer. *Hooker.* 6. The height of any heavenly body with respect to the horizon.—Some latitudes have no canicular days, as the which have more than 73° of northern *elevation*, as Nova Zembla. *Brown's Vulgar Errors.*

(2.) **ELEVATION OF THE HOST**, in the church of Rome, that part of the mass where the priest raises the host above his head for the people to adore.

(1.) * **ELEVATOR.** *n. f.* [from *elevate*.] A rafter or lifter up, applied to some chyrurgical instruments put to such uses. *Quincy.*

(2.) **ELEVATOR**, in anatomy, the name of several muscles, so called from their serving to raise the parts of the body to which they belong.

ELEVATORY, in surgery, an instrument for raising depressed or fractured parts of the skull, to be applied after the integuments and periosteum are removed. See **SURGERY**.

ELEVE', a French term, of late adopted into the English language. Literally it signifies a disciple or scholar, being formed from the Italian *lievo*, an apprentice or novice. It was first used by the French writers in speaking of the scholars of painters. It was next applied to such as studied any other art under a master. In the Royal Academy of Sciences, there were 40 *elevés*, and in the of inscriptions, 10, who acted in concert with the pensionaries. See **ACADEMY**, § XIII, 12. The *élève*, however, has given place to that of *adjunct* or *adjunct*, and the *elevés* are become *adjuncts*, or associates of the academy. See **ADJUNCT**.

* **ELEVEN.** *adj.* [*andlifen*, Sax.] Ten and one, one more than ten.—Had I a dozen sons, none less dear than Marcius, I had rather *eleven* die nobly for their country, than one voluptuously surfeit out of action. *Shakespeare.*

(1.) * **ELEVENTH.** *adj.* [from *eleven*.] The next in order to the tenth.—In the *eleventh* chapter

ter he returns to speak of the building of Babel. *Raleigh's History.*

(2.) ELEVENTH, or chord of the eleventh. See INTERVAL.

ELEUSINIA, in Grecian antiquity, a festival held in honour of Ceres, every 4th year by some rites; by others every 5th. The Athenians celebrated it at ELEUSIS, whence the name. CERES, says Ilocrats, wandering in quest of her daughter Proserpine, came into Attica, where some good offices were done her, which it is unlawful for those who are not initiated to hear. In return she conferred two unparalleled benefits; to wit, the knowledge of agriculture, by which the human race is raised above the brute creation; and the mysteries, from which the partakers derive sweeter pleasures than other men enjoy, both as to the present life and to eternity. It was the popular opinion, that the Eleusinian goddesses suggested prudent counsel to their votaries, and influenced their conduct; that these were respected in the infernal regions, and had precedence in the assemblies of the blessed; while the uninitiated were in utter darkness, wallowing in mire, or labouring to fill leaky vessels. The Athenians were solicitous to secure these advantages to their children, by having them initiated as soon as was allowed. Ceres is supposed to be particularly partial to Eleusis and its vicinity. There stood the memorials of her beneficence and of her bounty; the well, *Callichorus*, in which she had rested, in the reign of Erechtheus; the stone on which she sat, named *the farrow-suff*; the Rharian plain, where barley was first sown; the threshing floor and altar of Triptolemus, the herdsman whom she instructed in the culture of grain, the use of which succeeded to acorns. The mysteries continued to possess a pre-eminence of holiness, and to be accounted as much superior to all other religious festivals as the gods were to heroes. Even the garments worn at the solemnity were supposed to partake of their efficacy, and to be endowed with signal virtues. It was usual to retain them until they were perishing; and then to dedicate them in the temple, or to reserve them to wrap new-born children. The mystic robe provided by Pericles for the solemnity, rated such awe by its sanctity as could be equalled only by its beauty and magnitude. The profane or uninitiated were forbidden to enter it on any pretence. Two young Acarnanians happened inadvertently to mix with the crowd at the feast of the mysteries, and to go in; but the question pressed by their ignorance presently betrayed them, and their intrusion was punished with death. The chief priest, hierophant, or mystagogue, was taken from the EUMOLPIDÆ, a holy family at Athens, descended from Eumolpus, a shepherd and favourite of Ceres. He was enjoined celibacy, and wore a *sole*, or long garment, his hair, and a wreath of myrtle. The grand requisites in his character were strength and melody of voice, solemnity of deportment, magnificence, and great decorum. Under him, besides many of inferior station, was daduchus or torch-bearer, who had likewise his hair bound with a fillet; the priest, who officiated at the altar; and the *hieroceryx* or sacred herald; all very important personages.

The latter was of a family which claimed the god Mercury and Aglauros the daughter of Cecrops for its ancestors. The secrecy in which the mysteries were enveloped, served to enhance the idea of their consequence, and to increase the desire of participation. It was so strict, that no person was allowed even to name the hierophant by whom he had been initiated. Public abhorrence and detestation awaited the babler, and the law condemned him to death. The Athenians at first suffered none but citizens to be initiated into these mysteries. This regulation, which compelled Hercules, Castor, and Pollux, to become citizens of Athens, was strictly observed in the first ages of the institution, but afterwards all persons, barbarians excepted, were freely initiated. The Eleusinians were divided into great and less mysteries. The less were instituted from the following circumstance. Hercules passed near Eleusis while the Athenians were celebrating the mysteries, and desired to be initiated. As this could not be done, because he was a stranger, and as Eumolpus was unwilling to displease him on account of his great power, and the services which he had done to the Athenians, another festival was instituted without violating the laws. It was called *μυστα*, and Hercules was solemnly admitted to the celebration and initiated. These less mysteries were observed at Agræ near the Ilissus. The greater were celebrated at Eleusis, from which place Ceres has been called *Eleusinia*. In later times the smaller festivals were preparatory to the greater, and no person could be initiated at Eleusis without a previous purification at Agræ. This purification they performed by keeping themselves pure, chaste, and unpolluted, during nine days; after which they came and offered sacrifices and prayers, wearing garlands of flowers, called *στέφανοι* or *στεφάνοι*, and having under their feet *δρυς*, *καυθήρ*, *Jupiter's skin*, which was the skin of a victim offered to that god. The person who assisted was called *ἰδρωστής* from *ἵδρω* *water*, which was used at the purification, and they themselves were called *μυσταί*, *the initiated*. A year after the initiation at the less mysteries they sacrificed a fow to Ceres, and were admitted in the greater, and the secrets of the festivals were solemnly revealed to them, from which they were called *ἰσχυοί* and *ισχυοί*, *inspectors*. This festival was observed in the month Boedromion or September, and continued 9 days from the 15th till the 23d. During that time it was unlawful to arrest any man or present any petition, on pain of forfeiting 1000 drachmas, or according to others on pain of death. It was also unlawful for those who were initiated to sit upon the cover of a well, to eat beans, mullets, or weazels. If any woman rode to Eleusis in a chariot, she was obliged by an edict of Lycurgus to pay 6,000 drachmas. The design of this law was to destroy all distinction between the rich and poor citizens. When the season approached, the *μυσταί*, or persons who had been initiated only in the lesser mysteries, repaired to Eleusis to be instructed in the ceremonial. The service for the opening of the temple, with morning sacrifice, was performed. The ritual was then produced from the sanctuary. It was enveloped in symbolical figures of animals,

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which suggested words compendiously, in letters with ligatures, implicated, the tops huddled together, or disposed circularly like a wheel; the whole utterly inexplicable to the profane. The case, which was called *PETROMA*, consisted of two stones exactly fitted. The mysterious record was replaced after the reading, and closed up until a future festival. The principal rite was nocturnal, and confined to the temple and its environs. The mystæ waited without, with impatience and apprehension. Lamentations and strange noises were heard. It thundered. Flashes of light and of fire rendered the deep succeeding darkness more terrible. They were beaten, and perceived not the hand. They beheld frightful apparitions, monsters, and phantoms of a canine form. They were filled with terror, became perplexed and unable to stir. The scene then suddenly changed to brilliant and agreeable. The propylæa or vestibules of the temple were opened, the curtains withdrawn, the hidden things displayed. They were introduced by the hierophant and daduchus, and the former showed them the mysteries. The splendor of illumination, the glory of the temple and of the images, the singing and dancing which accompanied the exhibition, all contributed to sooth the mind after its late agitation, and to render the wondering devotee tranquil. After this inspection, called the *autopsia*, they retired, and others advanced. The succeeding days were employed in purification, in sacrifice, in pompous processions, and spectacles, at which they assisted, wearing myrtle crowns. The 2d day was called *αλας μυραι*, i. e. *to the sea, you that are initiated*; because they were commanded to purify themselves by bathing in the sea. On the 3d day sacrifices, and chiefly a mullet, were offered; also barley from a field of Eleusis. These oblations were called *Θυσια*, and held so sacred that the priests themselves were not permitted to partake of them. On the 4th day they made a solemn procession, in which the *καλαθον*, or *holy basket of Ceres*, was carried about in a consecrated cart, while on every side the people shouted *χαίρει Δημήτριε, Hail, Ceres!* After these followed women called *κισσάρες*, who carried *baskets*, in which was *sesamin*, carded wool, grains of salt, a serpent, pomegranates, reeds, ivy boughs, certain cakes, &c. The 5th was called *ἡ τῶν λαμπάδων ἡμέρα*, *the torch day*; because on the following night the people ran about with torches in their hands. It was usual to dedicate torches to Ceres, and contend who should offer the biggest, in commemoration of the travels of the goddess, and of her lighting a torch in the flames of mount *Ætna*. The 6th day was called *ἱαχῆς*, from *Iacchus*, the son of Jupiter and Ceres, who accompanied his mother in her search after Proserpine with a torch in his hand. From that circumstance his statue had a torch in his hand, and was carried in solemn procession from the *Gera-micus* to Eleusis. The statue with those that accompanied it, called *ἱαχάγοντες*, was crowned with myrtle. In the way nothing was heard but singing and the noise of brazen kettles as the votaries danced along. The way through which they issued from the city was called *ἱερὰ ὁδός*, *the sacred way*, the resting place was *ἱερὰ σπην*, from

a *fig-tree* which grew in the neighbourhood. They also stopped on a bridge over the *Cephissus*, where they derided those that passed by. After they had passed this bridge, they entered Eleusis by a place called *μυσταὶ ἑσθλῆς*, *the mystical entrance*. On the 7th day there were sports, in which the victors were rewarded with a measure of barley, as that grain had been first sown in Eleusis. The 8th day was called *Εὐδαιμονία*, because once *Æsculapius* at his return from *Epidaurus* to Athens was initiated by the repetition of the less mysteries. It became customary, therefore, to celebrate them a second time upon this that such as had not hitherto been initiated might be lawfully admitted. The ninth and last day of the festival was called *πλῆθος χυμοῦ*, *earthen vessels*, because it was usual to fill two such vessels with wine; one placed towards the east, and the other towards the west, which, after the repetition of some mystical words, were both thrown down, and the wine being spilt on the ground was offered as a libation. The story of Ceres and Proserpine, the foundation of the Eleusinian mystery was partly local. It was both verbally delivered and represented in allegorical show. Proserpine was gathering flowers when she was stolen by Pluto. Hence the procession of the holy basket, which was placed on a car dragged along by oxen and followed by a train of females, some carrying the mystic chests, shouting, *Hail, Ceres!* At the procession was made with lighted torches, commemorate the goddesses searching for her daughter. A measure of barley, the grain which, it is believed, she had given, was the reward of victors in the gymnastic exercises; and the tradition at the temple had a reference to the legend. A knowledge of these things and places, in which the profane were excluded, was the amount of initiation; and the mode of it, which had been devised by craft, was skilfully adapted to the reigning superstitions. The operation was simple, and the effect in proportion. The priesthood flourished as piety increased. The disposition was corrupt, but its tendency not malignant. It produced sanctity of manners and an attachment to the social duties; a desire to be as distinguished by what was deemed virtue as by silence. Some, however, have supposed the principal rites at the festival to have been obscene and abominable, and that from thence proceeded all the mysterious crecys. They were carried from Eleusis to Rome in the reign of Adrian, where they were observed with the same ceremonies as before, though perhaps with more licentiousness. They lasted about 1800 years, and were at last abolished by Theodosius the Great.

ELEUSIS, in ancient geography, a town in Attica between Megara and the Piræus, celebrated for the festivals of Ceres. See the last article. Those rites were finally extinguished in Greece upon the invasion of Alaric the Goth. Eleusis, on the overthrow of its goddesses and the cessation of its gainful traffic, became soon an obscure place, without character or riches. For some ages, however, it was not entirely forsaken, as is evident from the vast consumption of the ancient materials, and from the present remains, of which

the following account is given by Dr Chandler. "The port was small and of a circular form. The stones of one pier are seen above water, and the corresponding side may be traced. About half a mile from the shore is a long hill, which divides the plain. In the side next the sea are traces of a theatre, and on the top are cisterns cut in the rock. In the way to it, some masses of wall and rubbish, partly ancient, are standing; with ruined churches; and beyond, a long broken aqueduct crosses to the mountains. The Christian pirates had infested the place so much, that in 1676 it was abandoned. It is now a small village at the eastern extremity of the rocky brow, on which was once a castle; and is inhabited by a few Albanian families, employed in the culture of the plain, and superintended by a Turk, who resides in an old square tower. The proprietor was Achmet Aga, the private or principal person of Athens.—The mystic temple at Eleusis was planned by Ictinus, the architect of the Parthenon. Pericles was oversee of the building. It was of the Doric order; the cell so large as to admit the company of a theatre. The columns on the pavement within, and their capitals, were raised by Coræbus. Metagenes of Syete added the architraves and the pillars above them, which sustained the roof. Another completed the edifice. This was a temple *in antis*, or about exterior columns, which would have occupied the room required for the victims. The cell was changed to *Prostyleus* under Demetrius the Phalerean; Philo a famous architect erecting portico, which gave dignity to the fabric, and rendered the entrance more commodious. The cell was beneath the brow, at the E. end, and encompassed by the fortrefs. Some marbles, which are uncommonly massive, and some pieces of the columns, remain on the spot. The breadth of the cell is about 150 feet; the length, including the pronaoz and portico, is 216 feet; the diameter of the columns, which are fluted 6 inches from the bottom of the flutings, is 6 feet and more than 10 inches. The temple was a decastyle, or had 10 columns in the front, which was to the east. The cell was on inclosure, which surrounded it on the E. and on the S. side, measures 387 feet in length from N. to S. and 328 feet in breadth from E. to W. On the W. side it joined the angles of the S. end of the temple in a straight line. Between the W. wall of the inclosure and temple and the S. wall of the citadel was a passage of 42 feet 6 inches wide, which led to the summit of a high rock at the N.W. angle of the inclosure, on which are visible the traces of a temple *in antis*, in length 74 feet 6 inches from N. to S. and in breadth from E. to the wall of the citadel, to which it joined on the W. 54 feet. It was perhaps that sacred spot of Triptolemus. This spot commands a very extensive view of the plain and bay. About three miles of the cottages are within the precincts of the mystic temple, and the square tower stands in the ruined wall of the inclosure. At a small distance from the N. end of the inclosure is a heap of marble, consisting of fragments of the Doric and Ionic orders; remains, it is likely, of the temples of Diana Propylea and of Neptune,

and of the Propyleum or gateway. Wheeler saw some large stones carved with wheat ears and bundles of poppy. Near it is the bust of a colossal statue of excellent workmanship, maimed, and the face disfigured; the breadth at the shoulders, as measured by Pococke, 5 feet and an half; and the basket on the head above 2 feet deep. It probably represented Proserpine. In the heap are two or three inscribed pedestals; and on one are a couple of torches, crossed. We saw another fixed in the stone stairs, which lead up the square tower on the outside. It belonged to the statue of a lady, who was hierophant or priestess of Proserpine, and had covered the altar of the goddess with silver. A well in the village was perhaps that called *Callichorus*, where the women of Eleusis were accustomed to dance in honour of Ceres. A tradition prevails, that if the broken statue be removed, the fertility of the land will cease. Achmet Aga was fully possessed with this superstition, and declined permitting us to dig or measure there, until I had overcome his scruples by a present of a handsome snuff-box, containing several zechins or pieces of gold."

ELEUTHERA, or ALABASTER ISLAND, one of the Bahama islands. It has a fort and garrison. The climate is healthy and the soil fertile. Lon. 76. 31. W. Lat. 25. 14. N.

ELEUTHERI. See CADURCI.

ELEUTHERIA, a festival celebrated at Platæa in honour of *Jupiter Eleutherius*, or the *assertor of liberty*, by delegates from almost all the cities of Greece. Its institution originated in this: After the victory obtained by the Grecians under Pausanias, over Mardonius the Persian general, in Platæa, an altar and statue were erected to Jupiter Eleutherius, who had freed the Greeks from the tyranny of the barbarians. It was further agreed upon in a general assembly, by the advice of Aristides the Athenian, that deputies should be sent every 5th year, from the different cities of Greece, to celebrate Eleutheria, festivals of liberty. The Platæans celebrated also an anniversary festival in memory of those who had lost their lives in that famous battle. The celebration was thus: At break of day a procession was made with a trumpeter at the head, sounding a signal for battle. After him followed chariots loaded with myrrh, garlands, and a black bull, and certain free young men, as no signs of servility were to appear during the solemnity, because they in whose honour the festival was instituted had died in the defence of their country. They carried libations of wine and milk in large-eared vessels, with jars of oil, and precious ointments. Last of all appeared the chief magistrate, who, though not permitted at other times to touch iron, or wear garments of any colour but white, yet appeared clad in purple, and taking a water pot out of the city chamber, proceeded through the middle of the town, with a sword in his hand, towards the sepulchres. There he drew water from a neighbouring spring, and washed and anointed the monuments, after which he sacrificed a bull upon a pile of wood, invoking Jupiter and infernal Mercury, and inviting to the entertainment the souls of those happy heroes who had perished in the

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defence of their country. After this he filled a bowl with wine, saying, I drink to those who lost their lives in the defence of the liberties of Greece. There was also a festival of the same name observed by the Samians in honour of the god of love. Slaves also, when they obtained their liberty, kept a holiday, which they called *Eleutheria*.

(1.) * *ELF*. *n. s.* plural *elves*. [*elf*, Welsh. *Baxter's Gloss.*] 1. A wandering spirit, supposed to be seen in wild unfrequented places; a fairy.—

Through this house give glimmering light,

By the dead and drowly fire;

Every *elf*, and fairy sprite,

Hop as light as bird from brier, *Shakespeare.*

Fairy *elves*,

Whose midnight revels by some forest side,

Or fountain, some belated peasant sees,

Or dreams he sees. *Milton.*

The king of *elves* and little fairy queen

Gambol'd on heaths, and danc'd on ev'ry green. *Dryden.*

If e'er one vision touch'd thy infant thought,

Of all the nurse and all the priest have taught;

Of airy *elves* by moon light shadow seen,

The silver token, and the circled green. *Pope.*

2. A devil.—

That we may angels seem, we paint them *elves*;

And are but fatires to set up ourselves. *Dryden.*

However it was civil, an angel or *elf*;

For he ne'er could have fill'd it so well of himself. *Swift.*

(2.) *ELF*. See FAIRY.

* *ELF*. *v. a.* [from the noun.] To entangle hair in so intricate a manner, that it is not to be unravelled. This the vulgar have supposed to be the work of fairies in the night; and all hair so matted together, hath had the name of *elf-locks*. *Hammer.*

My face I'll grime with filth,

Blanket my loins, *elf* all my hair in knots. *Shakespeare.*

ELF ARROWS, in natural history, a name given to the flints anciently fashioned into arrow-heads, and still found fossil in Scotland, America, and several other parts of the world; they were believed to be shot by fairies, and that cattle were sometimes killed by them.

ELFELD, or *ELTYL*, a town of Germany, in the circle of the Lower Rhine, and electorate of Mentz, on the E. bank of the Rhine, 14 miles N. W. of Mentz.

* *ELFIN*. *adj.* [from *elf*.] Relating to fairies; *elfish*; belonging to *elves*.—

Now when that idle dream was to him brought,

Unto that *elfin* knight he bade him fly,

Where he slept soundly. *Spenser.*

* *ELF-LOCK*. *n. s.* [*elf* and *lock*.] Knots of hair twisted by *elves*.—

This is that very Mab,

That plats the manes of horses in the night,

And cakes the *elf-locks* in foal's luttish hairs,

Which, once untangl'd, much misfortune bodes. *Shakespeare.*

ELFORD, the name of 4 English villages: viz. 1. in Hampshire, near Lymington: 2. in Northumberland, S. of Bamburgh Castle: 3. in Ox-

fordshire, NE. of Brampton: and 4. in Staffordshire, on the Tame, N. of Tamworth, and three miles from Litchfield.

(1.) *ELFSBORG GAMLA*, or *OLD ELFSBORG*, a town of Sweden, in the province of W. Gothland, with a strong castle near the sea, 4 miles SW. of Gottenburg.

(2.) *ELFSBORG*, *NEW*, a fortress of Sweden, in the province of W. Gothland, built in the year 1646, on an island at the mouth of the Moldal, 4 miles W. of Gottenburg.

ELGA, a river which rises 3 miles N. from Penna Macor, in Portugal, and runs into the Tagus, between Alcantara and Roimarlhal, separating the countries of Spain and Portugal during its whole course of about 30 miles.

ELGATTAR, a town of Africa, in the country of Algiers, 37 miles S. of Bona.

ELGG, a town and district (ci-devant lordship) of the Helvetic republic, in the late canton of Zurich.

(1.) *ELGIN*, or *MORAYSHIRE*, a county in the N. of Scotland. See MURRAY.

(2.) *ELGIN*, or *ELGYN*, a parish in the above county, about 10 miles long and 6 broad. The surface is level, and the soil partly rich loam and clay, partly sand, but very fertile. The climate is so fine, that it is said there are 3 months more fair weather in this parish than in many places of the adjacent county of Banff. Agriculture, which was attended to so early as in the beginning of the 13th century, has been much improved within these 40 years. Oats, bear, pease, wheat, turnips, potatoes, clover and rye grass, are the chief produce, and great quantities of corn are exported; as are also linen yarn to the value of about L. 2000, and dressed skins for gloves, to about L. 400. The population, in 1792, stated by the rev. Mr John Grant, in his report to Sir J. Sinclair, was 1035 families, and 4534 souls. It has decreased no less than 1772, since 1755, which Mr Grant ascribes to 6 causes; viz. 1. Enlistment into the army and navy; 2. The increase of manufactures; 3. That of sheep farms; 4. The conversion of many small into a few large farms; 5. Consequent emigrations; and 6. The prevention of early marriage by increasing luxury.

(3.) *ELGIN*, or *ELGYN*, the capital of the above county, (N^o 1.) a royal borough, and formerly a bishop's see, is situated on the river Lossy, about six miles N. of the Spey. The rev. Mr John Grant, minister of Elgin, derives the name "from Helgy, general of the army of the gurd, the Norwegian Earl of Orkney, who, about 927, conquered Caithness, Sutherland, Ross and Moray. It is said that he built a town in the S. of Moray, which, it is probable was Elgyn, as it is situated to the S. of Duffeyrus, or the burgh in Duffus, where the Norwegians had a harbor for their shipping. Many Norwegian princes were also named Helgy, and the inscription upon the town seal is, "*S. commune civitatis de Helgyn*," engraved in Saxon characters, in a style earlier than the middle of the 16th century." (*Sir J. Sinclair's Stat. Acc. V. 2.*) In the reign of William the Lion, Elgin had a royal fort. Its most ancient charter in the archives is from Alexander II, in 1234, granting a guild to the burghesses with extensive

extensive privileges, when, Mr Grant observes, "there doubtless existed some foreign trade." In 1383, the burgesses had a trading vessel, named *Far coast*. Mr Pennant says, Elgin is a good town, and has many of the houses built over piazzas; but, excepting its great cattle fairs, has little trade. It is principally remarkable for its ecclesiastical antiquities. The cathedral, now in ruins, was formerly a very magnificent pile. The west door is richly ornamented. The choir is very beautiful, and has a fine light gallery running round it. At the E. end are two rows of narrow windows, in an excellent Gothic taste. The chapter house is an octagon; the roof supported by a fine single column with neat carvings of coats of arms round the capital. There is still a great tower on each side of this cathedral; but that in the centre, with the spire and whole roof, are fallen in; and for.n awful fragments, mixed with the battered monuments of knights and prelates. Beethius says that Duncan I, who was killed by Macbeth at Inverness, lies buried here. The cathedral was founded by Andrew de Moray, in 1224, in a piece of land granted by Alexander II. and it remains were deposited in the choir, under a slab of blue marble, in 1244. The great tower was built principally by John Innes, bishop of this E., as appears by the Latin inscription cut on one of the great pillars. Elgin is 30 miles E. of Inverness, and 108 N. of Edinburgh. This town, 1792, contained 638 families, and 2920 souls. *Ann.* 2. 25. W. Lat. 57. 40. N.

ELGOYHAR, a town of Spain, in the province of Guipuzcoa, 13 m. WSW. of St Sebastian. ELHAM, a town of England, in the county of Kent, 10 miles S. of Canterbury, and 67 ESE. of London.

ELHILL, a village in Lancashire.

ELI, (עֲלִי, Heb. *i. e.* offering,) high priest of Israel, and the last of the judges, except Samuel, succeeded Samson, about A. M. 2809; and A. A. C. 259. His piety, with the wickedness of his sons, and the consequent misfortunes of his family and his commonwealth, are recorded in 1 Sam. iv. xiv. and xxii. He died in the 40th year of his government, and 98th of his age, A. M. 2849, and A. L. C. 1099.

ELIANT, a town of France, in the department of Finisterre, 7½ miles E. of Quimper.

ELIAS, or ELIJAH, (from עֲלִי, God, and מֶלֶךְ, the Lord,) an eminent prophet of Israel, who escaped the common lot of mankind, by not suffering death; being translated, about A. M. 3050, and A. A. C. 895. His miracles, persecutions and final exit, are recorded in 1 Kings xvii—xxi. 2 Kings i. and ii.

ELIAS, MOUNT ST. a mountain near the shore of the NW. coast of N. America, NW. of Admiralty bay, and SE. of Prince William's Sound.

ELICHMAN, John, a native of Silesia in the 17th century, who practised physic at Leyden, and was remarkable for understanding 16 languages. He supported an opinion, that the German and Persian languages were derived from the same origin. His Latin translation of the Tablet of Cebes, with the Arabic version and the Greek, was printed at Leyden in 1640, under the care of Sal-

masius, who prefixed thereto a very ample preface.

* ELICIT. *adj.* [*elicitus*, Latin.] Brought into act; brought from possibility to real existence.—It is the virtue of humility and obedience, and not the formal *elicit* act of meekness: meekness being ordinarily annexed to these virtues. *Hammond*.—The schools dispute whether, in morals, the external action superadds any thing of good or evil to the internal *elicit* act of the will. *Soutb.*

* ELICITATION. *n. f.* [from *elicio*, Latin.] —That *elicitation* which the schools intend, is a deducing of the power of the will into act: that drawing which they mention, is merely from the appetibility of the object. *Bramhall*.

* To ELICITE. *v. a.* [*elicio*, Latin.] To strike out; to fetch out by labour or art.—Although the same truths may be *elicited*, and explicated by the contemplation of animals, yet they are more clearly evidenced in the contemplation of man. *Hale's Origin of Mankind*.—He *elicits* those acts out of the meer lapsed state of human nature. *Cheyne*.

* To ELIDE. *v. a.* [*elido*, Latin.] To break in pieces; to crush.—We are to cut off that whereunto they, from whom these objections proceed, fly for defence, when the force and strength of the argument is *elided*. *Hooker*.

ELIE, or ELLIE. See ELY.

* ELIGIBILITY. *n. f.* [from *eligible*.] Worthiness to be chosen.—The business of the will is not to judge concerning the nature of things, but to chuse them in consequence of the report made by the understanding, as to their *eligibility* or goodness. *Fiddes's Sermons*.

* ELIGIBLE. *adj.* [*eligibilis*, Latin.] Fit to be chosen; worthy of choice; preferable.—A British ministry ought to be satisfied, if, allowing to every particular man that his private scheme is wisest, they can persuade him, that next to his own plan, that of the government is the most *eligible*. *Addison's Freeholder*.—Did they really think, that going on with the war was more *eligible* for their country than the least abatement of those conditions? *Swift*.—That the most plain, short, and lawful way to any good end, is more *eligible* than one directly contrary in some or all of these qualities. *Swift*.—Certainty, in a deep distress, is more *eligible* than suspense. *Clarissa*.

* ELIGIBLENESS. *n. f.* [from *eligible*.] Worthiness to be chosen; preferableness.

ELIHU, (from עֲלִי, and מֶלֶךְ, Heb. *i. e.* He is my God,) the son of Barachel the Buzite, a descendant of Buz, the son of Nahor, Abraham's brother, and the youngest of Job's friends who visited him in his affliction. His remarkable speech to Job, and his senior friends, is recorded in the 32 and 3 following chapters. From some passages in that speech, particularly in ch. xxxiii. v. 4 and 6, as well as from the propriety of the sentiments expressed in it, and the signification of the name *Elihu*, and more especially from the Almighty himself being introduced as the next speaker, some commentators have supposed, that our Saviour is meant by this personage. But the particular mention that is made of Elihu's parentage, and ancestors, seems to carry a decisive refutation of this conjecture.

conjecture. Another conjecture, that Elihu was in fact the author of the book of Job, appears to be much better founded, from the 15th and 16th verses of chap. xxxii. where he seems to speak of himself as the writer of the narrative, and of the effect of his words upon Job's three senior friends. These two verses are indeed evidently a parenthesis, and cannot, by any construction of language, be reckoned a part of the speech, which precedes and follows them.

ELIJAH. See **ELIAS**. This eminent prophet, from his address to Baal's prophets, (1 Kings xviii, 27.) appears to be the earliest person on record who made use of that form of rhetoric called **IRONY**.

• **ELIMINATION.** *n. f.* [*elimino*, Lat.] The act of banishing; the act of turning out of doors; rejection. *Dis.*

ELING, a village in Hampshire, at the bottom of Southampton Bay.

ELINS, a town of Poland, in the palatinate of Bracław, 26 miles NE. of Bracław.

ELJOBELE, a town of Arabia, in the country of Yemen, 28 miles S. of Abu-Arisch.

ELLIOTT, or **ELLIOT**, George Augustus, Lord **HEATHFIELD**, was the youngest son of the late Sir Gilbert Elliott, Bart. of Stobs, in Roxburghshire; and was born at Stobs in 1718. He received the first rudiments of his education under a private tutor; and was early sent to the university of Leyden, where he made considerable progress in classical learning, and spoke with fluency and elegance the German and French languages. Being designed for a military life, he was sent from thence to the celebrated *Ecole Royale du Genie Militaire* conducted by the great Vauban, at La Fere in Picardy; where he laid the foundation of what he so conspicuously exhibited at the defence of Gibraltar. He completed his military course on the continent by a tour, for the purpose of seeing in practice what he had studied in theory. Prussia was the model for discipline, and he continued some time as a volunteer in that service. He returned to Scotland, in 1735, in the 17th year of his age, and was introduced by his father to Lieut. Col. Peers of the 23d reg. of foot, then lying at Edinburgh, as a youth anxious to bear arms for his king and country. He was accordingly entered as a volunteer in that regiment, where he continued for a year or more. He then went into the engineer corps at Woolwich, where he continued till 1740, when his uncle Col. Elliott appointed him his adjutant of the 2d troop of horse grenadiers. With these troops he went upon service to Germany, and was with them in a variety of actions. At the battles of Dettingen and Fontenoy, he was wounded. In this regiment he bought the rank of captain and major, and afterwards purchased the lieutenant-colonelcy from Col. Brewerton, who succeeded to his uncle. On arriving at this rank, he resigned his commission as an engineer, which he had enjoyed along with his other rank, and in which service he had been actively employed very much to the advantage of his country. He received the instructions of the famous engineer Belidor, and made himself completely master of gunnery. Had he not so

disinterestedly resigned his rank in the engineer department, he would long before his death, by regular progression, have been at the head of that corps. Soon after this he was appointed aid-de-camp to George II. and was distinguished for his military skill and discipline. In March 1759, he quitted the 2d troop of horse grenadier guards, being selected to raise, form, and discipline, the first regiment of light horse, called after him *Elliot's*. As soon as they were raised and formed, he was appointed to the command of the cavalry in the expedition on the coasts of France, with the rank of brigadier general. After this he passed into Germany, where he was employed on the staff, and greatly distinguished himself in a variety of movements; particularly at the battle of Minden, where he headed the ad line of horse under the marquis of Granby; and where his regiment displayed a strictness of discipline, an activity and enterprise, which gained them signal honour. Indeed they have been the pattern, both in regard to discipline and appointment, to the many light dragoon troops that have been since raised in our service. From Germany he was recalled in 1762, for the purpose of being employed as second in command in the memorable expedition against the Havannah. On the peace in 1763, his gallant regiment was reviewed by the king, when he presented to his majesty the standards which he had taken from the enemy. Gratified with the fine discipline and high character, the king asked Gen. Elliott what mark of his favour he could bestow on his regiment equal to their merit? He answered, that his regiment would be proud if his majesty should think, that, by their services, they were intitled to the distinction of *Royals*. It was accordingly made a royal regiment, with this flattering title, "The 15th, or *King's* Royal Regiment of Light Dragoons." At the same time the king expressed a desire to confer some honour on the general himself; but the latter declared, that the honour and satisfaction of his majesty's approbation of his services was his best reward. During the peace he was not idle. His great talents in the various branches of the military gave him ample employment. In 1774, he was appointed to succeed Gen. A'Court as commander in chief of the forces in Ireland; but did not continue long in this station, not even long enough to unpack all his trunks: for finding that interferences were made by petty authority derogatory of his own, he resisted the practice with becoming spirit; and not choosing to disturb the government of the sister kingdom on a matter personal to himself, he solicited to be recalled. He accordingly was so, and appointed to the command of Gibraltar in a fortunate hour for the safety of that important fortress. The system of his life, as well as his education, peculiarly qualified him for this trust. He was perhaps the most abstemious man of the age; neither indulging himself in animal food nor wine. He never slept more than four hours at a time; so that he was up later and earlier than most other men. He so inured himself to habits of hardiness, that the things which are difficult and painful to other men were to him his daily practice, and rendered pleasant by

by use. It could not be easy to starve such a man into a surrender, nor possible to surprise him. The example of the commander in chief in a besieged garrison had a most persuasive efficacy in forming the manners of the soldiery. Like him his brave followers came to regulate their lives by the most strict rules of discipline before there arose a necessity for so doing; and severe exercise, with short rest, became habitual to them by choice. The military system of discipline which he introduced, and the preparations which he made for his defence, were contrived with so much judgment, and executed with so much address, that he was able with a handful of men to preserve his post against an attack, the constancy of which, even without the vigour, had been sufficient to exhaust any common set of men. Collected within himself, he in no instance destroyed, by premature attacks, the labours which would cost the enemy time, patience, and expence to complete; he deliberately observed their approaches, and seized the proper moment, with the keenest perspection, in which to make his attack with success. He never spent his ammunition in useless parade, or unimportant attacks. He never relaxed from his discipline by the appearance of security, nor lowered the lives of his garrison by wild experiments. By a cool and temperate demeanour, he maintained his station for three years of constant engagement, in which all the powers of Spain were employed. All the eyes of Europe were on this garrison; and his conduct has justly exalted him to the most elevated rank in the military annals of Britain. On his return to England, the gratitude of the British senate was as forward as the public voice in giving him that distinguished mark his merit deserved. Both houses of parliament voted a unanimous address of thanks to the general. The king conferred on him the honour of Knight of the Bath, with a pension during his own and a second life of his own appointment; and on June 2, 1787, his majesty advanced him to the peerage by the title of *Lord Heathfield, Baron Gibraltar*, permitting him to take, in addition to his military arms, the arms of the fortress he had so bravely defended, to perpetuate to futurity his noble conduct. Lord Heathfield died on the 6th May, 1790, at his chateau at Aix-la-chapelle, of a second stroke of the palsy, after having for some weeks preceding enjoyed tolerable good health and an unusual flow of spirits. His death happened a days before he was to have set out for Leghorn in his way to Gibraltar; of which place he was once more appointed to the defence, in the view of an approaching war.—He married Anne, daughter of Sir Francis Drake of Devonshire; and had by her (who died in 1769) Francis Augustus, now Lord Heathfield, lieutenant-colonel of the 6th regiment of horse.

ELIPHAZ, {from *El*, and *Phaz*, i. e. the strength of God;} the eldest of Job's three uncharitable friends. From his being still the *Temanite*, it is evident that he was a descendant of Esau, by *Teman*, the son of Eliphaz, and grandson of Esau, the first duke of Edom; which contributes to assist the chronologist in fixing the period when Job lived.

ELIQUATION, in chemistry, an operation

by which a more fusible substance is separated from one that is less so, by means of a heat sufficiently intense to melt the former, but not the latter. Thus an alloy of copper and lead may be separated by a heat capable of melting the latter, but not the former.

(1.) ELIS, or ELEA, in ancient geography, a fertile district of Peloponnesus, famous for raising flax, which equalled that of Judæa in fineness, though not so yellow, and grew no where else in Greece.

(2.) ELIS, the capital of the above district, situated on the Peneus, which ran through it. It was the country of PHÆDO the friend of Plato, and of Pyrrho the founder of the PYRRHONISTS. This city owed its origin to an union of small towns after the Persian war. It was not encompassed immediately with a wall; for it had the care of the temple at Olympia, and its territory was solemnly consecrated to Jupiter. To invade or not protect it was deemed impiety; and armies, if marching through it, delivered up their weapons, which, on their quitting it, were restored. Amidst warring states this city enjoyed repose, was resorted to by strangers, and flourished. It was a school for Olympia, which was distant 37 miles. The athletic exercises were performed there; before the more solemn trial, in a gymnasium, by which the Peneus ran. The HELLANODICS, or præfects of the games, paired the rival combatants by lot, in an area called PLETHRIUM or *The Acce*. Within the wall grew lofty plane trees; and in the court, which was called the XYSTUS, were separate courses marked for the foot-races. A smaller court was called the *Quadrangle*. The præfects, when chosen, resided for 10 months in a building erected for their use, to be instructed in the duties of their office. They attended before sun-rise to preside at the races; and again at noon, the time appointed for the pentathlon or five sports. The horses were trained in the agora or market-place, which was called the HIPPODROME. In the gymnasium were altars and a cenotaph of Achilles. The women, besides other rites, beat their bosoms in honour of this hero, on a fixed day toward sunset. There also was the town-hall, in which extemporary harangues were spoken and compositions recited. It was hung round with bucklers for ornaments. A way led from it to the baths through the Secret of Silence; and another to the market-place, which was planned with streets between porticoes of the Doric order adorned with altars and images. Among the temples one had a circular peristyle or colonnade; but the image had been removed and the roof was fallen in the time of Pausanias. The theatre was ancient, as was also a temple of Bacchus, one of the deities principally adored at Elis. Minerva had a temple in the citadel, with an image of ivory and gold made by Phidias. At the gate leading to Olympia was the monument of a person, who was buried, as an oracle had commanded, neither within nor without the city. The structures of Elis, Dr Chandler observes, seem to have been raised with materials far less elegant and durable than the produce of the Ionian and Attic quarries. The ruins are of brick, and not considerable, consisting of pieces of ordinary wall,

walls, and an octagon building with niches, which, it is supposed, was the temple with a circular peristyle. These stand detached from each other, ranging in a vale southward from the wide bed of the river Peneus; which, by the margin, has several large stones, perhaps reliques of the gymnasium. The citadel was on a hill, which has on the top some remnants of a wall.]

(3.) ELIS, a village of Northumberland, NW. of Dala.

ELISA. See DIDO.

ELISABETH. See ELIZABETH.

ELISÆUS. See ELISHA.

ELISAVETGRAD, a town of Russia, in the government of Ekaterinoflav, on the Ingul, 108 miles W. of Ekaterinoflav.

ELISHA, [from *el* and *sha*, Heb. *i. e.* the salvation of God,] or ELISÆUS, the son of Shaphat, an eminent prophet of Israel, the disciple and successor of ELIJAH. His call, with his various miracles and prophecies are recorded in 1 Kings, xix, xxi. 2 Kings, ii.—viii. and xiii. He died much lamented by Joash king of Israel, A. M. 3165, and A. A. C. 830.

ELISHAH, the son of Javan, and grandson of Japhet, is supposed by chronologists to have been the progenitor of the inhabitants of Eolia, in Lesser Asia, and of Elis and Alifium in Peloponnesus.

ELISHAW, a village in Northumberland.

(1.) * ELISION. *n. f.* [*eliso*, Latin.] 1. The act of cutting off; as, *can't, th' attempt*, there is an elision of a syllable.—You will observe the abbreviations and *elisions*, by which consonants of most obdurate sounds are joined together, without any softening vowel to intervene. *Swift*. 2. Division; separation of parts.—The cause given of sound, that it would be an *elison* of the air, whereby, if they mean any thing, they mean a cutting or dividing, or else an attenuating of the air, is but a term of ignorance. *Bacon's Natural History*.

(2.) ELISIONS are pretty frequently met with in English poetry, but more frequently in the Latin, French, &c. They are chiefly used in suppressing the *a*, *e*, and *i*; though they may also suppress any of the other vowels.

* ELIXATION. *n. f.* [*elixus*, Latin.] The act of boiling or stewing any thing.—Even to ourselves, and more perfect animals, water performs no substantial nutrition; serving for refrigeration, dilution of solid aliments, and its *elixation* in the stomach. *Brown*.

(1.) * ELIXIR. *n. f.* [Arabick.] 1. A medicine made by strong infusion, where the ingredients are almost dissolved in the menstruum, and give it a thicker consistence than a tincture. *Quincy*.—

For when no healing art prevail'd,

When cordials and *elixirs* fail'd,

On your pale cheek he dropp'd the show'r,

Reviv'd you like a dying flow'r. *Waller*.

2. The liquor, or whatever it be, with which chymists hope to transmute metals to gold.—

No chymist yet th' *elixir* got,

But glorifies his pregnant pot,

If by the way to him befall

Some odoriferous thing, or medicinal. *Donne*.

3. The extract or quintessence of any thing.—In the

soul, when the supreme faculties move regularly, the inferior passions and affections following, there arises a serenity infinitely beyond the quintessence and *elixir* of worldly delight. *South*. 4. Any cordial; or invigorating substance.—

What wonder then, if fields and regions here
Breathe forth *elixir* pure! *Milt. Par. Lc. 4.*

(2.) ELIXIR, in medicine, (§ 1. *def.* 1.) is defined by others, a compound tincture extracted from many efficacious ingredients. The difference between a tincture and an elixir seems to be this, that a tincture is drawn from one ingredient, sometimes with an addition of another to open it and to dispose it to yield to the menstruum; whereas an elixir is a tincture extracted from several ingredients at the same time.

(1.) ELIZABETH, queen of England, daughter of Henry VIII. and Ann Boleyn, was born at Greenwich, Sept. 7th, 1533. She was early instructed in the learned languages, first by Grindal, and afterwards by the celebrated Roger Ascham. She acquired likewise considerable knowledge of the Italian, Spanish, and French languages. Dr Grindal was also her preceptor in divinity, which she is said to have studied with uncommon application and industry. That Elizabeth became a Protestant, and her sister Mary a Papist, was the effect of that cause which determines the religion of the most of mankind; namely, the opinions of those by whom they are educated; and this difference of opinion, in their tutors, is not at all surprising, when we recollect that their father was of both religions, and of neither. But the studies of Elizabeth was not confined merely to languages and theology; she was acquainted with the political history of the ancients; and was also well skilled in music. After the short reign of her brother Edward, our heroine being then about 20 years of age, her father's grand sister acceding to the crown, Elizabeth experienced a considerable degree of persecution, as to be even apprehensive of a violent death. She was accused of nobody knows what; imprisoned; and we are told, inhumanly treated. At last by the intercession of king Philip of Spain, she was set at liberty; which she continued to enjoy till, on the death of her pious sister, she, on the 17th of Nov. 1558, ascended the throne of England. Her political history as a queen, is universally known and admired: (See ENGLAND.) In her attention to government, did not suspend her pursuit of learning. Ascham in his *Schoolmaster* tells us, that, about 1563, five years after her accession, she being then at Windsor, besides her perfect readiness in Latin, Italian, French, and Spanish, she read more Greek in one day than some prebendaries of that church did read Latin in a whole week. She employed Sir John Foxe to read to her Thucydides, Xenophon, Polybius, Euripides, Æschines, and Sophocles. (*Ballard*, p. 219.)—That the Latin language was familiar to her, is evident from her speech to the university of Oxford, when she was near 60; as well as from her spirited answer to the Polish ambassador in 1598. That she was also skilled in the art of poetry appears, not only from the several scraps which have been preserved, but from the testimony of a cotemporary writer, Puttenham, who

who in his *Art of Engl. Poetry* (a very scarce book) says, "But, last in recital, and first in degree, is the queen, whose learned, delicate, noble muse, easily surmounteth all the rest, for sense, sweetness, or subtilty, be it in ode, elegy, epigram, or any other kind of poem," &c. In this author we to be found only a specimen of 16 verses of her English poetry. "But," says Mr Wilpole, "a greater instance of her genius, and that too in Latin, was her extempore reply to an insolent prohibition delivered to her from Philip II. by his ambassador, in this tetrastrich.

Te veto ne pergas bello defendere Belgas:
Quæ Dracus eripuit, nunc restituantur oportet:
Quas pater everit, jubeo te condere cellas:
Religio papæ fac restituantur ad unguem.

She instantly answered him, with as much spirit as she used to return his invasions,"

Ad Græcas, bone rex, sient manulata kalendas.
being pressed by a Romish priest, during her persecution, to declare her opinion concerning the real presence of Christ's body in the wafer, she answered,

Christ was the Word that spake it;
He took the bread, and brake it;
And what that Word did make it,
That I believe, and take it.

Fuller.

Walter Raleigh having wrote on a window,
Fain would I climb, yet fear I to fall;
He immediately wrote under it,
Thy heart lift thee, climb not at all.

Worth. of Devonsh. 161.

Elizabeth was doubtless a woman of singular capacity and extraordinary acquirements; and, if I could forget the fate of our Q. Mary, and of our own favourite Essex, together with the burning of a few Anabaptists; in short, could we forget to contemplate her character through the medium of religion and morality, we might pronounce her the most illustrious of illustrious women. (See ENGLAND, MARY, and SCOTLAND.) She died at Richmond, the 24th March 1603, aged 70, having reigned 44 years; and was interred in the chapel of Henry VII. in Westminster Abbey. Her successor James erected a magnificent monument to her memory.—She wrote, 1. *A Mirror, or Glasse of the Sinful Soule*. This was translated out of French verse into English verse, when she was eleven years old. It was dedicated to queen Catharine Parr. Probably it was never printed; but the dedication and preface are preserved in the *Sylogæ epistolarum*, in the 3d edition of *Livii Fori-Julianensis*, p. 161.

Prayers and Meditations, &c. Dedicated to her father, dated at Hattfield, 1545. M.S. in the Bodleian library. 3. A Dialogue out of Xenophon, Greek, between Hiero a King, yet some time private person, and Simonides a Poet, as touching the life of the Prince and Private Man. First printed, from a M.S. in her own hand writing, in the Gentleman's Magazine for 1743. 4. Two translations of Isocrates, translated into Latin. 5. A Latin Oration at Cambridge. Preserved in the Bodleian library; in Hollinshed's Chron. p. 1206; and in Fuller's Hist. of Cambr. p. 138. 6. Latin Oration at Oxford: in Wood's Hist. and Antiq. of Ox. lib. i. p. 289. also in Dr Jebb's Appendix to his Life of Mary Q. of Scots. 7. A Comment Vol. VIII. PART I.

on Plato. 8. *Boethius de consolatione philosophiæ*, translated into English; 1593. 9. *Salustius de bello Jugurthino*, translated into English; 1590. 10. A play of Euripides, translated into Latin, (Cat. of Royal Auth.) 11. A Prayer for the use of her fleet in the great expedition in 1596. 12. Part of Horace's Art of Poetry, translated into English anno 1598. 13. *Putarch de curiositate*, translated into English. 14. Letters on various occasions to different persons: several speeches to her parliament; and a number of other pieces.

(II.) ELIZABETH, empress of Russia, daughter of Peter the Great, (whence her patronymic title of *Petrovna*;) distinguished herself by her signal clemency. She made a vow, that no person should be put to death in her reign, and she strictly observed it. The example was followed, and confirmed by law, under the late Catharine II. Elizabeth died in 1762, in the 21st year of her reign, and 53d of her age. See RUSSIA.

(III.) ELIZABETH, in geography, a township of Pennsylvania, in Lancaster county, which has a Dutch church; 18 miles NW. by W. of Lancaster, and 84 W. by N. of Philadelphia.

(IV.) ELIZABETH also makes part of the names of several other places in America; viz.

1. ELIZABETH, CAPE, a promontory on the NW. coast of America. It forms the W. point of Prince William's Sound, and the E. of Cook's river. Lon. 152. 15. W. Lat. 59. 10. N.

2. ELIZABETH CITY, a county of Virginia, between the rivers James and York, bounded by Warwick and York counties on the W. and Chesapeake Bay on the E. and N. It is 18 miles long, and 8 broad, and contained 1,574 citizens, and 1,876 slaves, in 1790, according to Dr Morse; but Mr Joseph Scott, in his *United States Gazetteer*, makes the number 2,574 citizens, and 8,176 slaves.

3. ELIZABETH ISLANDS, 16 small islands of Massachusetts, on the SE. side of Buzzard's Bay, extending SW. from Barnstable county, and bearing NW. from Martha's vineyard. Citalunk, Nashawn, Nashawennaj, Pasqui, and Pinequese, are the chief of them. They belong to Duke's county, and lie between Lon. 76. 38. and 70. 56. W. and between Lat. 41. 24. and 41. 32. N.

4. ELIZABETH RIVER, a river of the United States, the S. head water of which rises from the Great Dismal Swamp, and running through Virginia, falls into James river. A navigable canal was begun to be dug in 1797, to connect this river with the PASQUOTANK, which is 14 miles distant. The canal company are incorporated by the legislatures of Virginia and N. Carolina. This canal will pass about a mile E. of Drummond's Pond, from which it will receive water; and when finished, will open a most beneficial inland navigation from the head of Chesapeake Bay, including all the rivers in Virginia to Georgetown in S. Carolina, and by the canal from Elkton to Christiana creek, will extend to Philadelphia, and the other ports connected with the Delaware.

5. ELIZABETH'S BAY, a bay of S. America, in the Straits of Magellan. Lon. 73. 24. W. Lat. 53. 43. S.

6. ELIZABETH'S ISLAND, QUEEN, an island in the above bay.

7. ELIZABETH-TOWN, a post town of N. Carolina, capital of Bladen county, on the NW. branch of Cape Fear river; 36 miles S. of Fayetteville, and 47 NW. of Wilmington.

8. ELIZABETH-TOWN, a town of N. Carolina, capital of Tyrrel county, in Edentown district; 40 miles from Fayetteville, and 55 NW. of Wilmington.

9. ELIZABETH-TOWN, a post town of New Jersey, in Essex county, seated on a rivulet, which runs into Arthur Kull, 6 miles S. of Newark, and 15 SW. by W. of New York. It is one of the oldest towns in the state, having been purchased of the Indians so early as 1664. It has a handsome presbyterian church, and had formerly an elegant episcopal one, which was burnt in 1780, by a refugee, a native and inhabitant of the town! Lon. 1. 3. E. of Philadelphia: Lat. 40. 39. N.

10. ELIZABETH-TOWN, a post town of Maryland, capital of Washington county, formerly called HAGAR'S TOWN, seated in the vale of Conechoaque, 6 miles from the Potomac. It has an Episcopalian, a Presbyterian, and a German Lutheran church; with a court house, jail, and 320 houses in regular streets. It carries on a good trade with the western country, and lies 175 miles W. by S. of Philadelphia. Lon. 2. 37. W. of that meridian: Lat. 39. 38. N.

11. ELIZABETH-TOWN, a town of Pennsylvania in Lancaster county, in the township of ELIZABETH, (See N° III.) seated on Conoy creek, which falls into the Susquehanna. Lon. 1. 26. W. of Philadelphia. Lat. 40. 9. N.

12. ELIZABETH-TOWN, a village of Pennsylvania, in Allegany county, on the SE. side of the Monongahela, 18 miles SE. of Pittsburg, and 513 W. by N. of Philadelphia. Lon. 79. 22. W. Lat. 40. 13. N.

(1.) * ELK. *n. f.* [*elc*, Saxon.] The *elk* is a large and stately animal of the stag kind. The neck is short and slender; the ears nine inches in length, and four in breadth. The colour of its coat in Winter is greyish, in Summer it is paler. The horns of the male *elk* are short and thick near the head, where it by degrees expands into a great breadth, with several prominences in its edges. *Hill*.—

And, scarce his head

Rais'd o'er the heapy wreath, the branching *elk*
Lies numb'ring silent in the white abyss. *Thomf.*

(2.) ELK, in zoology. See CERVUS, § I. 1; N° 1, 2.

(3.) ELK, in geography, a navigable river of the United States in the Eastern Shore of Maryland; which rises in Cheffer county, Pennsylvania, and running SSW. 38 miles, falls into Chesapeake Bay, on the S. side of Turkey Point.

(4.) ELK, a short navigable river in Tennessee and Georgia, which rises in Tennessee, near the head waters of Duck river, and running SW. falls into the Tennessee at Muscle shoals.

(5.) ELK ANTELOPE, in zoology. See CAPRA, § VII. N° 12.

ELKESLEY, a village in Nottinghamshire.

ELKHOLM, a sea port of Sweden, in Bleking, on the Baltic, 24 miles W. of Carlscroon. Lon. 14. 15. E. Lat. 56. 20. N.

ELK-HORN, a river of Kentucky, which rises in Fayette county, and running NW. by W. falls

into the Kentucky, 8 miles below Frankfort, where it is 50 yards broad. Its whole course, which is remarkably crooked, is about 50 miles.

ELKINGTON, NORTH, } Two English vil-
ELKINGTON, SOUTH; } lages near Louth
Lincolnshire.

ELKRIDGE, a town of Maryland, in An- Arundel county, on the S. bank of the Patuxet, 8 miles SW. of Baltimore, and 19 NW. of Annapolis. Lat. 39. 12'. 30". N.

ELKSTONE, a village of England, 10 miles E. of Gloucester.

ELKTON, a post town of Maryland, in the Eastern Shore, capital of Cecil county, seated at the confluence of the head waters of the Elk, 13 miles above its mouth. It has a court house, an academy, and a brisk trade; and lies 47 miles SW. of Philadelphia, and 56 SE. of Baltimore. Lon. 0. 46. W. of Philadelphia. Lat. 39. 37. N.

(1.) * ELL. *n. f.* [*eln*, Saxon.] 1. A measure containing 45 inches, or a yard and a quarter. They are said to make yearly 40,000 pieces of linen cloth, reckoning 200 *ells* to the piece. *Ad. dison*. 2. It is taken proverbially for a long measure.—

Acquit thee bravely, play the man;

Look not on pleasures as they come, but go:
Defer not the last virtue; life's poor space

Makes not an *ell* by trifling in thy woe. *Herbert*

(2.) The ELL is a measure, which obtains under different denominations, in most countries whereby cloths, stuffs, linens, silks, &c. are usually measured; answering nearly to the yard of England, the canna of Italy, the vara of Spain, the palm of Sicily, &c. Servius will have the *ell* to be the space contained between the two hands when stretched forth; but Suetonius makes it only the cubit. The *ells* most frequently used with us are the English and Flemish; the former containing 3 feet 9 inches, or one yard and a quarter; the latter only 27 inches, or 3 quarters of a yard; so that the *ell* English is to the Flemish as 5 to 3. In Scotland, the *ell* contains 37 1/2 English inches. M. Ricard, in his Treatise of Commerce, reduces the *ells* thus: 100 *ells* of Amsterdam are equal to 98 1/2 of Brabant, Antwerp, and Brussels; to 58 1/2 of England and France; to 120 of Hamburg, Francfort, Leipzig, and Cologne; 125 of Breslaw; 110 of Bergeu and Drontheim; and 117 of Stockholm.

ELLAR, a town of Germany, in the circle of Westphalia, and principality of Nassau Dillenburg, 12 miles SSE. of Dillenburg.

ELLEDAT, a town of the island of Ceylon, 12 miles S. of Candy.

ELLEHOFM, or ELKHOLM. See ELKHOLM.

(1.) ELLEN, a river in Cumberland.

(2.) ELLEN, a town of the French republic, in the department of the Roer, and ci-devant duchy of Juliers, 4 miles SE. of Juliers.

ELLENBOGEN, a town of Germany, in the county of Bregentz, 17 miles SSE. of Bregentz.

ELLENBOROUGH, a town of England, in Cumberland near Maryport.

ELLENHALL, a village in Staffordshire.

ELLENHOFEN, a town of Germany, in the county of Bregentz, 14 miles ENE. of Bregentz.

ELLERBECK, a town near Northallerton.

ELL

ELLERENA, or ELERENA, a town of Spain, in the province of Extremadura, belonging to the knights of the order of St. Jago, by whom it was founded; 55 miles N. of Seville, and 52 W. of Cordova. Lon. 10. 48. E. Peak of Teneriffe. Lat. 28. 8 N.

ELLERKER, a village in Yorkshire.

ELLERSLEE, or } the ancient patrimonial
ELLERSLIE. } seat of the celebrated Scots
patriot, Sir William Wallace, lies near Paisley in
Westshire.

(1.) ELLERTON, a town in Shropshire.

(2.) ELLERTON, in Yorkshire, near Derwent.

(3.) ELLERTON, in Yorkshire, N. of the Swale.

ELLESBOROUGH, a village in Bucks.

ELLESDON, a town of Northumberland, 28
miles NW. of Newcastle. Lon. 1. 49. W. Lat.
55. 20. N.

(1.) ELLESMERE, a large lake in Salop.

(2, 3.) ELLESMERE, a town and fertile district,
situated on the above lake, 16 miles NNW. of
Barnsbury, and 176 NW. of London. Lon. 2.
31. W. Lat. 52. 53. N.

ELLEFELD, a town of Germany, in the circle
of Upper Saxony, and circle of Vogtland, 2 miles
S. of Auerbach.

ELICHPOUR, a city of Indoostan, and capi-
tal of a circle of the same name, in the county of
Berar, subject to the Nizam. It was formerly the
capital of Berar; and is 144 miles NE. of Aurun-
ghabad. Lon. 77. 46 E. Lat. 21. 12. N.

ELLIE. See ELY, N° 2, and 3.

ELLINBURGH, a town in Lancashire.

ELLINGHAM, the name of 5 English villages;
1. in Hampsh. N. of Ringwood: 2. in North-
ampton, SW. of Attleburgh: 3. in ditto, W. of Bec-
con: 4. in ditto, SW. of Hingham; and, 5. in Nor-
thumberland, NW. of Sunderland.

(1.) ELLINGTON, a township of Connecti-
cut, in Tolland county, 12 miles NE. of Hart-
ford, 6 W. of Tolland; containing about 200 fa-
milies.

(2-4.) ELLINGTON, the name of 3 English
villages: viz. 1. in Huntingdonsh. near Silthorpe;
2. and 3. in Yorkshire, near Malham.

ELLIOT, Lord Heathfield. See ELIOT.

ELLIPOMACROSTYLA, in natural history,
[from *ελλειψ* imperfect, *μακρος* long, and *στυλος* a co-
lumn; q. d. an imperfect crystal with a long co-
lumn;] the name of a genus of crystals. The per-
fect figure of crystal being a column terminated
by a pyramid at each end, those which want this
character are esteemed imperfect: and according-
ly the bodies of this genus are defined to be im-
perfect crystals with single pyramids; one end of
their column being affixed to some solid body, and
composed of thin and slender hexangular columns,
terminated by hexangular pyramids. They are
dodecahedral. Of these crystals authors enu-
merate many species; among which are the whitish
pellucid sprig crystal, a bright brown kind, a dull
brown kind, and a bright yellow kind; all which
are farther distinguished according to the different
lengths of their pyramids.

ELLIPOPACHYSTYLA, in natural history,
[from *ελλειψ* imperfect, *παχυς* thick, and *στυλος* a co-
lumn, q. d. an imperfect crystal with a thick co-

lumn;] a genus of crystals; the bodies of which
are composed of an hexangular column, consider-
ably thick and short, affixed irregularly at one end
to some solid body, and terminated at the other
by an hexangular pyramid. There are two spe-
cies; one short, bright, and colourless, found in
great plenty in New Spain and other parts of A-
merica; the other, a short, dull, and dusky
brown one, found in Germany, and sometimes in
England.

ELLIPSE, or } in geometry. See CONIC
(1.) ELLIPSIS, } SECTIONS, Index.

(2.) * ELLIPSIS. n. f. [*ελλειψις*.] 1. A figure
of rhetoric, by which something is left out ne-
cessary to be supplied by the hearer: as, *the thing*
I love, for the thing which I love.—The words are
delivered by way of *ellipsis*, Rom. iv. 18. *Ham-*
mond. 2. [In geometry.] An oval figure, being
generated from the section of a cone, by a plane
cutting both sides of the cone, but not parallel to
the base, which produces a circle, and meeting
with the base when produced. *Harris.*—On the
cylinder inclined, describe an *ellipsis* parallel to
the horizon. *Wilkins's Dedalus.*—The planets
could not possibly acquire such revolutions in cir-
cular orbs, or in *ellipses* very little eccentric.
Bentley.

* ELLIPTICAL. } *adj.* [from *ellipsis*.] Ha-

* ELLIPTICK. } ving the form of an ellip-
sis; oval.—Since the planets move in *elliptick* or-
bits, in one of whose foci the sun is, and by a ra-
dius from the sun describe equal areas in equal
times, which no other law of a circulating fluid,
but the harmonical circulation, can account for;
we must find out a law for the paracentral mo-
tion, that may make the orbits *elliptick*. *Cheyne's*
Phil. Prin.—In animals that gather food from the
ground, the pupil is oval or *elliptical*; the great-
est diameter going from side to side. *Cheyne's*
Phil. Prin.

ELLIS, a river of the United States, a branch
of the Saco, in the district of Maine.

ELLISIA, in botany: A genus of the monogy-
nia order, belonging to the pentandria class of
plants; and in the natural method ranking under
the 28th order, *Lurida*. The corolla is monoepa-
lous and funnel shaped; the berry carnosous and
bilocular; there are two seeds muricated or set
with small raised points, the one higher than the
other.

ELLISLEY, a village in Cambridgeshire.

(1.) ELLON, a parish of Scotland, in Aber-
deenshire, 9 miles long from S. to N. and 5 broad.
The surface is partly hilly, and the higher grounds
are covered with heath. The soil is very various.
Oats and bear are the chief produce; flax, turn-
ips, clover, rye-grass, and potatoes, are also cul-
tivated. There are likewise small plantations of
firs, elms, ashes, alders, &c. The population in
1791, as stated by the rev. Mr Miln, in his report
to Sir J. Sinclair, was 1730, and had decreased
693 since 1755. All the women and some old
men and boys are employed in knitting stockings.
A valuable salmon fishery is established on the
Ythan, which runs through the parish, from
W. to E.

(2.) ELLON, the only village in the above pa-
rish,

rish, contained 190 souls in 1791. It has 1 small manufactory of woollen cloth; and 4 fairs on Tuesdays; in May, June, Aug. and Novem.

ELLOUGHTON, a town near Ferriby, Yorks.

ELLOW, in Suffolk, S. of Beckles.

(1.) * **ELM**. *n. f.* [*ulmus*, Lat. *elm*, Saxon.] 1. The name of a tree. The species are, the common rough leaved elm; the witch hazel, or broad-leaved elm, by some called the British elm; the smooth-leaved or witch elm. Neither of them were originally natives of this country; but they have propagated themselves by seeds and suckers in such plenty, as hardly to be rooted out; especially in hedgerows, where there is harbour for their roots. They are very proper to place in hedgerows upon the borders of fields, where they will thrive better than when planted in a wood or close plantation, and their shade will not be very injurious to whatever grows under them; for they may be trained in form of an hedge, keeping them cut every year, to the height of 40 or 50 feet; but they should not be planted too near fruit trees; because the roots of the elm will intermix with the roots of other trees, and deprive them of nourishment. *Miller*.—

The rural seat,

Whose lofty *elms* and venerable oaks,

Invite the rook, who high amid the boughs,

In early Spring, his airy city builds. *Thomson*.

2. It was used to support vines, to which the poets allude.—

Thou art an *elm*, my husband; I a vine,

Whose weakness married to thy stronger state,

Makes me with thy strength to communicate.

Shakesp.

(2.) **ELM**, in botany. See **ULMUS**.

(3.) **ELM**, in geography, a town of the Helvetic republic, in the ci-devant canton of Glaris; 6 miles S. of Glaris.

(1.) **ELMA**, a river of Russia.

(2.) **ELMA**, a town of Russia, in the government of Archangel, at the conflux of the Elma and the Petchora, 312 miles E. of Archangel.

ELMACINUS, George, author of a *History of the Saracens*, was born in Egypt towards the middle of the 13th century. His history comes down from Mahomet to the year of the Hegira 512, answering to A. D. 1134; in which he sets down year by year, in a very concise manner, whatever regards the Saracen empire, intermixed with some passages relating to the eastern Christians. His abilities must have been considerable; since, though he professed Christianity, he held an office of trust near the persons of the Mahometan princes. He was son to Yaser Al Almud, secretary to the council of war under the sultans of Egypt for 45 years; and in 1238, when his father died, succeeded him in his place. His history of the Saracens was translated from Arabic into Latin by Erpinus; and printed in these two languages in folio, at Leyden, in 1625. Erpinus died before the publication; but Golius took care of it, and prefixed a preface. It was dedicated by Erpinus's widow to Dr Andrews, bishop of Winchester.

ELMADIA, **ELMEDEA**, or **AFRICA**, a port of Tunis. See **AFRICA**.

(1.) **ELME**, a village in Cambridgeshire.

(2.) **ELME**, in Somersetshire, near Whitley.

(3.) **ELME**, St. castle, in the isle of Malta, seated on a rock near Valletta, at the mouth of a fine harbour.

ELMEDINE, or **ALMEDINE**, a town of Africa, in the empire of Morocco, on the edge of Mount Atlas.

ELMEDON, 3 English villages, viz. 1. in Durham, near Butterwick; 2. in Essex, W. of Walden; and, 3. in Warwickshire.

ELMELEY, in the isle of Sheppey, Kent.

ELMEN, or **ALT-SALZA**, a town of Germany, in the circle of Lower Saxony, and principality of Magdeburg, 10 miles SSE. of Magdeburg.

ELMEN-YAWER, near Usk, Monmouthshire.

ELMERHAM, near the Ouse, Bedfordshire.

ELMERTON, SW. of Cromer, Norfolkshire.

ELMESBALL, N. and S. 2 villages in York.

ELMESBORN, a town of Germany, in the duchy of Holstein, 18 miles NW. of Hamburg.

ELMESTEAD, 2 villages in Kent.

ELMESWORTH, in W. Medina, isle of Wight.

ELMETON, NE. of Bolsover, Derbyshire.

ELMHURST, near Litchfield, Staffordshire.

ELMINTON, a village in Gloucestershire.

(1.) **ELMORE**, 4 miles SW. of Gloucestershire.

(2.) **ELMORE**, the southernmost township in Orleans county, Vermont.

ELMSTED, a town E. of Colchester, Essex.

ELMSTON, 4 miles NW. of Cheltenham.

ELNBOGEN. See **ELBOGEN**, N. 1 and 2.

(1.) **ELNE**, a river in Cumberland, which runs into the Irish sea, 4 miles N. of Workington.

(2.) **ELNE**, a town of France, in the department of the Eastern Pyrenees, 7½ miles SE. of Perpignan. It suffered much during the civil wars, under Lewis XI.

ELNIA, a town of Russia, in the government of Smolensk, 34 miles ESE. of Smolensk. Lat. 57. 5. E. Ferro. Lat. 54. 25. N.

(1.) * **ELOCUTION**. *n. f.* [*elocutio*, Lat.]

The power of fluent speech.—A travelled diction of physick, of bold, and of able *elocution*. *Wotton*.

2. Power of speaking; speech.—

Whose taste, too long forborne, at first

Gave *elocution* to the mute, and taught

The tongue not made for speech to speak thy

praise. *Milton*.

3. The power of expression or diction; eloquence; beauty of words.—The third bappiness of his poet's imagination is *elocution*, or the art of cloathing or adorning that thought so found, and varied, in apt, significant, and sounding words. *Dryden*.—As I have endeavoured to adorn it with noble thoughts, so much more to express those thoughts with *elocution*. *Dryden*.

(2.) **ELOCUTION**. See **ORATORY**.

(1.) * **ELOGY**. *n. f.* [*elogio*, Fr.] Praise; panegyrick.—Buckingham lay under millions of maledictions, which at the prince's arrival did vanish into praises and *elogues*. *Wotton*.—If I durst say all I know of the *elogies* received concerning him, I should offend the modesty of our author. *Boyle*.—Some excellent persons, above my approbation or *elogy*, have considered this subject. *Holder's Elements of Speech*.

(2.) *As*

(1.) *AN ELODY*, or *EULOGIUM*, should not be so much as one epithet, properly so called, or two words synonymous: it should strictly adhere to truth; for extravagant and improbable eulogies rather lessen the character of the person or thing they would extol. The beauty of elogy consists in expressive brevity.

ELOHI, { *עֲלֹהִים*, Heb. *אלוהים*, Syr.] in scripture, one of the names of God.
ELOHIM, }
ELOI, } But it is to be observed, that angels, princes, great men, judges, and even false deities, are sometimes called by this name. The poet of the discourse, is what assists us in judging justly concerning the true meaning of this word. It is the same as *ELOHA*. The one is the singular, the other the plural. Nevertheless *Elohim* is constructed in the singular number, particularly when the true God is spoken of; but when the gods are spoken of, it is construed rather in the plural.

* *To ELOIGNE*. *v. a.* [*eloigner*, Fr.] To put at a distance; to remove one far from another. *was* diffused.—

From worldly care himself he did *eloigne*,
And greatly thinned manly exercise. *Fairy Q.*
I'll tell thee now, dear love! what thou shalt do

To anger destiny, as she doth us;
How shall I stay though the *eloigne* me thus,
And how posterity shall know it too. *Donne.*
ELOINED, *part. adj.* in law, signifies restrained hindered from doing something: thus it is said, &c. if those within age be elained, so that they not sue personally, their next friend shall sue them.

1. *ELON*, the 12th judge of Israel, and the father of Jephthah, succeeded Ibzan, about A. M. 1010; or, according to Alstedius, 2771. He was of the tribe of Zebulun, and after governing the people ten years, died about A. A. C. 1167.

2. *ELOW*, a city of the Danites.

1. * *To ELONGATE*. *v. a.* [from *longus*, Lat.] 1. To lengthen; to draw out; to protract; to stretch. 2. To put further off.—The first star Arcturus, in the time of Meton the Athenian, was fixed in the very intersection, which is now *elongated*, and moved eastward twenty-eight degrees.

2. * *To ELONGATE*. *v. n.* To go off to a distance from any thing.—About Cape Frio in Asia, the South point of the compass varieth the degrees into the West; but *elongating* from the coast of Brasilia, towards the shore of Africa, varieth eastward. *Brown's Vulg. Errors.*

1. * *ELONGATION*. *n. f.* [from *elongate*.] 1. The act of stretching or lengthening itself.—To the motion of *elongation* of the fibres, is owing the force or conglutination of the parts of the body, when they are separated by a wound. *Arbutnot.* The state of being stretched. 3. [In medicine.] Imperfect luxation, when the ligament of any joint is so extended or relaxed as to lengthen the joint, but yet not let the bone go quite out of its place. *Quincy.*—*Elongations* are the effect of an *unusual* looking upon a ligament, thereby making it liable to be stretched, and to be thrust quite upon every little force. *Wilsman.* 4. Distance; space at which one thing is distant from

another.—The distant points in the celestial expanse appear to the eye in so small a degree of *elongation* from another, as bears no proportion to what is real. *Glanville.* 5. Departure; removal.—Nor then had it been placed in a middle point, but that of descent, or *elongation*. *Brown.*

(2.) *ELONGATION*, in astronomy, the digression or recess of a planet from the sun, with respect to an eye placed on our earth. The term is chiefly used in speaking of Venus and Mercury, the arch of a great circle intercepted between either of these planets and the sun being called the *elongation* of that planet from the sun.

* *To ELOPE*. *v. a.* [*loopen*, to run, Dutch.] To run away; to break loose; to escape from law or restraint.—It is necessary to treat women as members of the body politic, since great numbers of them have *eloped* from their allegiance. *Addison.*—

What from the dame can Paris hope?

She may as well from him *elope*.

Prior.

The fool whose wife *elopes* some thrice a quarter,

For matrimonial solace dies a martyr. *Pope.*

(1.) * *ELOPEMENT*. *n. f.* [from *elope*.] Departure from just restraint; rejection of lawful power: commonly used of a wife.—An *elopement* is the voluntary departure of a wife from her husband to live with an adulterer, and with whom she lives in the breach of the matrimonial vow. *Ayliffe.*—The negligent husband, trusting to the efficacy of his principle, was undone by his wife's *elopement* from him. *Arbutnot.*

(2.) *An ELOPEMENT*, in law, frees the husband from any obligation to allow the adulteress any alimony out of his estate; nor is he chargeable for necessities for her of any kind. However, the bare advertising a wife in the gazette, or other public paper, is not a legal notice to persons in general not to trust her; though a personal notice given by the husband to particular persons is said to be good.—An action lies, and large damages may be recovered, against a man for carrying away and detaining another man's wife.

(1.) * *ELOPS*. *n. f.* [*ελος*.] A fish; reckoned however by *Milton* among the serpents.—

Scorpion and asp, and amphibia dire,
Ceraustes horn'd, hydrus, and *elops* drear,
And dipsas.

Milton.

(2.) *ELOPS*. See *ACCIPENSER*.

(1.) * *ELOQUENCE*. *n. f.* [*eloquentia*, Latin.] 1. The power of speaking with fluency and elegance; oratory.—

Action is *eloquence*, and the eyes of the ignorant

More learned than the ears. *Shakespeare.*

Athens or free Rome, where *eloquence*

Flourish'd, since mute. *Milton.*

His infant softness pleads a milder doom,

And speaks with all the *eloquence* of tears.

Heigh.

2. Elegant language uttered with fluency.—

Say she be mute, and will not speak a word;

Then I'll commend her volubility,

And say she uttered piercing *eloquence*. *Shakespeare.*

Fit words attended on his weighty sense,

And mild persuasion flow'd in *eloquence*. *Pope.*

(2.) *ELOQUENCE*. See *ORATORY*.

* *ELO*

* **ELOQUENT.** *adj.* [*eloquens*, Lat.] Having the power of oratory; having the power of fluent and elegant speech.—The Lord of hosts doth take away the captain of fifty, and the honourable man, and the counsellor, and the cunning artificer, and the *eloquent* orator. *Isaiab.* iii. 3.—

O death! all *eloquent*, you only prove
What dust we dote on, when 'tis man we love.

Pope.

ELORA, a town of Indostan, in the country of Aurungabad; celebrated for its pagodas, cut out of the natural rock; 13 miles N. of Aurungabad.

ELOTZ, a town of Russia, in the government of Orloff, 112 miles ENE. of Orel. Lon. 57. E. Ferro. Lat. 53. 20. N.

ELOVKA, a town of Russia in the government of Tobolsk, 16 miles WNW. of Tomsk.

ELOYES, a town of France, in the dept. of Volges, 7½ miles SE. of Epinal.

ELPHIN, a town of Ireland, in the county of Roscommon, with a bishop's see; 8 miles N. of Boyle, 16 of Roscommon, and 25 N. of Dublin. Lon. 8. 20. W. Lat. 53. 46. N.

ELRICH, a town of Germany, in the circle of Upper Saxony, and county of Klettenburg, formerly the capital of the county. Here are some considerable manufactures. It is 6 miles NW. of Nordhausen.

ELS, a town of Moravia, in the circle of Brunn, 32 miles W. of Olmutz, and 24 NNW. of Brunn.

ELSA, a river of Italy, which falls into the Arno.

ELSBOROUGH, a town near Wendover, Bucks.

(1.) * **ELSE.** *adv.* [*elles*, Sax.] 1. Otherwise.—
Dare not, on my life,

Touch ought of mine beside, by lot my due,
But stand aloof, and think profane to view:
This faulchion, *else*, not hitherto withstood,
These hostile fields shall fatten with thy blood.

Dryden.

—What ways are there whereby we should be assured, but either by an internal impression of the notion of a God upon our minds, or *else* by such external and visible effects as our reason tells us must be attributed to some cause? *Tillotson.* 2. Beside; except that mentioned.—

Pleasures which no where *else* were to be found,

And all Elysium in a spot of ground. *Dryden.*
3. It has sometimes or before it superfluously.—

Be more abstemious,

Or *else*, good night your vow. *Shakefp.*

(2.) * **ELSE.** *pronoun.* Other; one besides: it is applied both to persons and things.—To stand stained with travel, and sweating with desire to see him; thinking of nothing *else*, putting all affairs *else* in oblivion, as if there were nothing *else* to be done but to see him. *Shakefp. Henry IV.*—Should he or any *else* search, he will find evidence of the Divine Willdom. *Hale's Origin of Man-kind.*—

He says, 'twas then with him, as now with you;

He did it when he had nothing *else* to do. *Denb.*

ELSEN, a town of Germany, in the circle of Westphalia, and bishopric of Paderborn, 2 miles WNW. of Paderborn

ELSENHAM, a town near Broxted, Essex.

* **ELSEWHERE.** *adv.* [*else* and *where*.] 1. In any other place.—There are here divers trees, which are not to be found *elsewhere.* *Abbot's Description of the World.*—As he proved that *Pidon* was not Ganges, or Gihon, Nilus; so where to find them *elsewhere* he knew not. *Raleigh.*—

For, if we chance to fix our thoughts *elsewhere*,

Though our eyes open be, we cannot see.

Daniel.

Henceforth oracles are ceased,
And thou no more with pomp and sacrifice
Shalt be enquir'd at Delphos, or *elsewhere.*

Milton.

—Although seasoned bodies may and do live as long; in London as *elsewhere*, yet new comers and children do not. *Graunt's Bills of Mortality.* 2. In other places; in some other place.—Thou which *elsewhere* complain, that injury is offered the meanest minister, when the magistrate appoints him what to wear, think the gravest prebend no competent judges where it is fit for the minister to stand. *Hooker.*—

Let us no more contend, nor blame
Each other, blam'd enough *elsewhere.*

Bestow, base man, thy idle threats *elsewhere.*
My mother's daughter knows not how to fly.

Dryden.

—If it contradict what he says *elsewhere*, it is new or strange thing. *Tillotson.*

ELSFIELD, a village NE. of Oxford.

ELSFLETH, a town of Germany, in the circle of Westphalia, and county of Oldenburg, at conflux of the Hunte and the Weser, whose amounts to 30,000 rixdollars a-year. It is 17 miles NE. of Oldenburg.

ELSGAU, a ci-devant bailiwick of Basel, in the Helvetic republic, comprehending the towns of Porrentrui, and 20 parishes.

ELSHAW, a village in Lincolnshire.

ELSHEIMER, Adam, a celebrated painter, born at Francfort on the Maine, in 1574. He was first a disciple of Philip Uffenbach a German; going to Rome, he soon became a most excellent artist in landscapes, history, and night pieces, and small figures. His works are but few; and great pains he bestowed in finishing them, so that their prices so high, that they are seldom to be found but in the cabinets of princes. He was a melancholy turn, and sunk under the embarrassments of his circumstances, in 1610. James El Thomas, of Landau, was his disciple; and imitated his style so nicely, that their performances are not easily distinguished.

ELSIMBURG, or **HELSIMBURG**, a port town of Sweden, in the province of Gothland, and territory of Schonen, seated on the side of the Sound, 7 miles E. of Elsinore. It was formerly a fortress belonging to the Danes; but all the fortifications were demolished in 1679, and there is only a tower of a castle which remains undemolished. It now belongs to Sweden. Lon. 13. 20. E. Lat. 56. 2. N.

ELSINEUR, or **HELSINGOER**, a port town

ELSINORE, of Denmark seated on the Sound, in the isle of Zealand. It is

a small village, containing a few fishermen's boats.

til 1445, when it was made a staple town by Eric of Pomerania; who conferred upon the new settlers considerable immunities, and built a castle for their defence. From that period it gradually increased in size and wealth, and is now the most commercial place in Denmark, next to Copenhagen. It contains about 5000 inhabitants, amongst whom are a considerable number of foreign merchants, and the consuls of the principal nations trading to the Baltic. The passage of the Sound is guarded by the fortress of Cronborg, which is situated upon the edge of a peninsular promontory, the nearest point of land from the opposite coast of Sweden. It is strongly fortified towards the shore by ditches, bastions, and regular entrenchments; and towards the sea by several batteries, mounted with 60 cannon, the largest whereof are 48 pounders. Every vessel, as she passes, shows her top-sails, and pays a toll at Elsinore. *See* DENMARK, § 15, and SOUND. Lon. 56. 0. E. Lat. 56. 23. N.

ELSNABBEN, a sea-port of Sweden, in the province of Sudermannia, on the coast of the Baltic, 15 miles ENE. of Nikioping.

ELSTAKE, a village near Skipton, Yorkshire.

ELSTED, 2 villages in Surry and Suffex.

(1.) ELSTER, a river of Germany, in the circle of Upper Saxony, which passes by Adorf, Oelsnitz, Zwickau, Zeitz, Pegau, Leipzig, &c. and joins the Elbe, about 5 miles from Hale.

(2.) ELSTER, a town of Upper Saxony, seated on the above river, 10 miles S. of Oelsnitz.

(3.) ELSTER, a town of Germany, in the province of Thuringia, in the circle of Upper Saxony, 10 miles E. of Wittenberg.

(4.) ELSTER, BLACK, or } a river of Upper Saxony, SCHWARTZ, } Saxony, which rises out 10 miles E. of Stolpen, in the margraviate of Meissen, and runs into the Elbe, 6 miles E. of Wittenberg.

ELSTERBERG, a town of Upper Saxony, 15 miles SW. of Zwickau.

ELSTERWERDA, a town of Upper Saxony, in the margraviate of Meissen, 17 miles N. of Meissen and 26 NNW. of Dresden.

ELSTON, the name of six English villages; 2. 1. in Gloucestershire, between Grantham and Bedworth; 2. in Lancashire; 3. near Leicester; 4. in Nottinghamsh. between Bingham and Newark; 5. in Salop, W. of Ellesmere; and, 6. in Wiltsh. NW. of Stonehenge.

ELSTOW, a village near Bedford.

ELSTRA, a town of Lusatia, 2 miles S. of Caspar.

ELSWICK, three villages; viz. 1. in Lancashire, N. of Kirkham; 2. in Northumberland, W. of Newcastle; 3. in ditto, opposite Farne Island.

ELTEMAN, or ELTMAN. *See* ELTMAN.

ELTEN, a town of the French republic, in the department of the Roer, and ci-devant duchy of Cleves; 5 miles N. of Cleves.

ELTERLEIN, a town of Germany, in the circle of Upper Saxony, 2 miles ENE. of Grunhain.

ELTHAM, a town of England, in Kent, where Edward I. built a palace, which was the chief residence of Edward II. but of which hardly a stone now remains. It has a weekly market on Monday; and is 2 miles ESE. from London.

ELTMAN, a town of Germany, in the circle of Franconia, and bishopric of Wurtzburg, seated on the Maine, 8 miles WNW. of Bamberg, and 40 ENE. of Wurtzburg. Lon. 10. 52. E. Lat. 50. 8. N.

ELTON, the name of 8 English villages; viz. 1. in Cheshire, between Delamere Forest and the Mersey; 2. in Derby, N. of Aldwark; 3. in Durham, SW. of Stockton; 4. in Hertfordshire; 5. in Huntingdonshire, near Fotheringhay; 6. in ditto, near Stilton; 7. in Gloucestershire; and, 8. in Nottinghamshire, E. of Bingham.

EL-TOR. *See* TOR.

ELTRINGHAM, a town in Northumberland.

ELTZ, a town of Lower Saxony, seated on the Leina, 10 miles SW. of Hildesheim. Lon. 10. 5. E. Lat. 50. 5. N.

ELVAS, a large town, and one of the most important in Portugal, in the province of Alentejo, a few miles from the frontiers of Spanish Estramadura. It is built on a mountain, and is strongly fortified with works of free-stone. The streets of the town are handsome, and the houses neat; and there is a cistern so large, that it will hold water enough to supply the whole town 6 months. The water is conveyed to it by a magnificent aqueduct, 3 miles in length, sustained in some places by 4 or 5 high arches, one upon another. Elvas was bombarded by the French and Spaniards, in 1706, but without effect. It has generally a garrison of 1000 men. The king founded an academy here, in 1733, for young gentlemen. Elvas is seated on a mountain, near the Guadiana; 50 miles NE. of Evora, and 100 E. of Lisbon. Lon. 7. 3. W. Lat. 38. 43. N.

ELVASTON, a village in Derby, near the conflux of the Derwent and the Trent.

* To ELUCIDATE. *v. a.* [*elucido*, Latin.] To explain; to clear; to make plain.—To *elucidate* a little the matter, let us consider it. *Boyle*.

* ELUCIDATION. *n. f.* [from *elucidate*.] Explanation; exposition.—We shall, in order to the *elucidation* of this matter, subjoin the following experiment. *Boyle*.

* ELUCIDATOR. *n. f.* [from *elucidate*.] Explainer; expositor; commentator.—Obscurity is brought over them by the course of ignorance and age, and yet more by their pedantical *elucidators*. *Abbot*.

* To ELUDE. *v. a.* [*eludo*, Lat.] 1. To escape by stratagem; to avoid any mischief or danger by artifice.—Several pernicious vices, notorious among us, escape or *elude* the punishment of any law yet invented. *Swift*.—He who looks no higher for the motives of his conduct than the resentments of human justice, whenever he can presume himself cunning enough to *elude*, rich enough to bribe, or strong enough to resist it, will be under no restraint. *Rogers*. 2. To mock by an unexpected escape.—

Me gentle Delia beckons from the plain,
Then, hid in shades, *eludes* her eager swain;
But feigns a laugh to see me search around,
And by that laugh the willing fair is found. *Pope*.

* ELUDIBLE. *adj.* [from *elude*.] Possible to be defeated.—There is not any common place more insisted on than the happiness of trials by juries; yet if this blessed part of our law be *eludible* by power

power and artifice, we shall have little reason to boast. *Swiss.*

ELVEDON, a town W. of Thetford, Suffolk.

ELVELA, in botany: A genus of the natural order of fungi, belonging to the cryptogamia class of plants. The fungus is turbinated, or like an inverted cone.

* ELVELOCK. *n. f.* [from *elves* and *lock.*]

Knots in the hair superstitiously supposed to be tangled by the fairies.—From the like might proceed the fears of polling *elvelocks*, or complicated hairs of the head. *Brown's Vulgar Errors.*

ELVEN, a town of France in the department of Morbihan, $\frac{7}{8}$ miles NE. of Vannes.

* ELVES. The plural of *elf*. See *ELF*.—

Fairy elves.

Whose midnight revels by some forest side,
Or fountain, some belated peasant sees,
Or dreams he sees. *Milton.*

Ye sylphs and sylphids to your chief give ear;
Fays, fairies, genii, *elves* and demons hear. *Pope.*

ELVETHAM, a village in Hampshire.

ELVINGTON, a town SE. of York.

* ELVISH. *adj.* [from *elves*, the plural of *elf*.] it had been written more properly *elvisb.* Relating to elves, or wandering spirits.—

Thou *elvish* markt, abortive, rioting hog!
The slave of nature, and the son of hell! *Shak.*
No muse hath been so bold,
Or of the latter or the old,
Those *elvish* secrets to unfold,
Which lie from others reading. *Drayton.*

ELUL, (אֱלוּל,) in chronology, the 12th month of the Jewish civil year, and the 6th of the ecclesiastical: it consisted of only 29 days, and answered pretty nearly to our August.

* ELUMBATED. *adj.* [*elumbis*, Lat.] Weakened in the loins. *Diâ.*

* ELUSION. *n. f.* [*elusho*, Lat.] An escape from enquiry or examination; a fraud; an artifice.—An appendix, relating to the transmutation of metals, detects the impossibilities and *elusions* of those who have pretended to it. *Woodward's Nat. Hist.*

* ELUSIVE. *adj.* [from *elude*.] Practising elusion; using arts to escape.—

Elusive of the bridal day, she gives
Fond hopes to all, and all with hopes deceives. *Pope's Odyssey.*

* ELUSORY. *adj.* [from *elude*.] Tending to elude; tending to deceive; fraudulent; deceitful; fallacious.—It may be feared they are but Parthian flights, ambuscade retreats; and *elusory* tergiversations. *Brown's Vulgar Errors.*

* To ELUTE. *v. a.* [*eluo*, Lat.] To wash off.—The more oily any spirit is, the more pernicious; because it is harder to be *eluted* by the blood. *Arbutnot on Aliments.*

* To ELUTRIATE. *v. a.* [*elutrio*, Latin.] To decant; or strain out.—The pressure of the air upon the lungs is much less than it has been computed by some; but still it is something, and the alteration of one tenth of its force upon the lungs must produce some difference in *elutriating* the blood as it passes through the lungs. *Arbutnot on Air.*

ELUTRIATION, *n. f.* in chemistry, an operation performed by washing solid substances with water, stirring them well together, and basily

pouring off the liquid, while the lighter part remains suspended in it, that it may thereby be separated from the heavier part. By this operation metallic ores are separated from earth, stones, and other unmetallic particles adhering to them.

(1.) ELWANGEN, a principality of Germany in Suabia, bordering on the duchy of Wurtemberg.

(2.) ELWANGEN, the capital of the above principality, seated on the Jaxt, 17 miles E. of the 25 SW. of Anspach, 32 N. of Ulm, and 42 NNW. of Augsburg. Lon. 10. 28. E. Lat. 49. 2. N.

ELWELL, a town in Dorsetshire, N. of Upwey.

ELWICK, SW. of Hartlepool, Durham.

ELWORTH, E. & W. near Abbotsbury, Dorset.

(1.) ELWY, a town in Northumberland.

(2, 3.) ELWY, or ELNY, two rivers of N. Wales. 1. in Denbighshire: 2. in Glamorganshire, running into the Clwyd, near St Asaph.

(1.) ELY, a city and bishop's see of Cambridgeshire, situated about 12 miles N. of Cambridge. It is a county of itself, including the territory round; and has a judge who determines all civil and criminal within its limits. The church has undergone various alterations since it was established by Ethelreda, the wife of Egfrid, king of Northumberland, who founded a religious house here, planted it with virgins, and became the first abbot of it herself. The Danes entered and ruined this establishment. Ethelwald, the bishop of Winchester, rebuilt the monastery, filled it with monks; on whom king Edgar, several succeeding monarchs, bestowed many privileges, and great grants of land; so that the bey became in process of time the best of England. Richard, the 11th abbot, wishing to free himself of the bishop of Lincoln, within whose diocese his monastery was situated, and not so powerful a superior, he made great intrigues with king Henry 1. to get Ely erected into a shoprick; and spared neither purse nor prayer to bring this about. He even brought the bishop of Lincoln to consent to it, by giving him and his successors the manors of Bugden, Biggleswade, Spalding, which belonged to the abbey, in lieu of his jurisdiction; but he lived not to taste the fruit of his industry and ambition, he dying before the abbey was erected into a see. His successor the first bishop of Ely: but the great privilege the bishop enjoyed were almost wholly taken away, or much restricted, by the act of parliament 27th Henry VIII. regarding the restoring to the crown the ancient royalties: So, instead of being palatine of the isle of Ely, the bishop and temporal steward were by that act declared to be thenceforth justices of the peace in the island. This diocese contains all Cambridgeshire and the isle of Ely, excepting Isthem, which belongs to the see of Rochester, and 15 other parishes that are in the diocese of Norwich; but it has 1 parish in Norfolk, viz. Emneth. The number of parishes in this diocese are 121, whereof 75 are impropriate. It has but one archdeacon, viz. of Ely. It is valued in the king's books at L. 2134: 18: 3. The clergy's tenth, amounting to L. 384: 14: 9. The bishopric is computed to be worth annually L. 4000. The church is dedicated to St Ethelred. The building, as it now appears, has been the work

work of several of its bishops. This see has given two saints and two cardinals to the church of Rome; and to the English nation 9 lord chancellors, 7 lord treasurers, one lord privy seal, one chancellor of the exchequer, one chancellor to the university of Oxford, two masters of the rolls, and 3 almoners. To this cathedral belong a bishop, a dean, an archdeacon, 8 prebendaries, with vicars, lay-clerks, choristers, a schoolmaster, usher, and 28 king's scholars. The population of the town is 2500. Ely is 17 miles N. of Cambridge, and 68 N. of London. Lon. o. 9. E. Lat. 52. 24. N.

(2.) ELY, or ELLIE, a small parish of Scotland, on the S. coast of Fifeshire, a mile and an half long and one mile broad. The population, in 1790, stated by the rev. Mr Fairman, in his report to Sir J. Sinclair, was 152 families, containing 620 souls; being 22 less than in 1755. The whole parish is enclosed with hedges and ditches by the chief proprietor, Sir John Anstruther. Near the town, (N. 3.) in the face of Kincairdie rocks, fronting the sea, is the *Cave of MacDuff*, a stupendous arch, where MacDuff, thane of Fife, hid and defended himself against his pursuers, in his flight from Macbeth to prince Malcolm in England. The inhabitants of *Earlsferry* (so named from him) ferried him over to North Berwick; and when Malcolm was restored, he obtained many privileges to the town; and among others this singular one, that, upon the application of any person accused of a crime and flying for his life, the town is obliged to ferry him over immediately, and must not ferry over his pursuers, till the supposed criminal is half way over the Frith. This privilege it is said was granted and granted in the case of Carnegie and Douglas of Finhaven.

(2.) ELY, ELIE, or ELLIE, [from a *liche*, Gael. a out of the sea,] an ancient royal borough in the above parish, (N. 2.) built so near the sea that it washes the walls in some places, and seems to threaten to resume what it gave, if the derivation and tradition be true, that the town was originally built out of it. It has an excellent harbour, the deepest in the Frith, except that of Bruntland. Mr Fairman says, "it is the resort of more wind-bound vessels, than any other harbour except in Scotland. It has also been the means of saving many a ship, cargo, and seaman, that would otherwise have been driven out of the Frith." Seven square-rigged vessels, carrying 1000 to 1100 tons, belong to it, all employed in foreign trade besides one coasting sloop. Vessels of considerable size are built; and manufactures of beads, bed ticks and ropes are carried on in Ely. Lobsters have been got on the shore.

(4.) ELY, a town of Wales, in Glamorganshire.
(5.) ELY, ISLE OF, a fenny district in Cambridgeshire, near Bedford Level, which comprehends the town and diocese of Ely, (see N. 1.) and is partly overflowed by water in winter. Immense numbers of wild fowls are taken in it. See *Worcester*, N. 7; and *CAMBRIDGE*, N. 1.

(6.) ELY NESS, a promontory of Scotland, on the S. coast of Fifeshire, at the mouth of the Frith of Forth. Lon. o. 22. E. of Edinburgh. Lat. 56. N.

ELYMAIS, the capital of Elam, or Persia. We are told (1 Mac. vi. 1.) that Antiochus Epiphanes, Vol. VIII. PART II.

having understood that there were very great treasures lodged in a temple at Elymais, determined to plunder it: but the citizens getting intelligence of his design, made an insurrection, forced him out of the city, and obliged him to fly. The author of the ad book of Maccabees (ix. 2.) calls this city *Persepolis*, in all probability because formerly it was the capital of Persia: for it is known from other accounts, that *Persepolis* and *Elymais* were two very different cities, the latter situated upon the Eulæus, the former upon the Araxes.

ELYMUS, in botany: A genus of the digynia order, belonging to the triandria class of plants; and in the natural method ranking under the 4th order, *Gramina*. The calyx is lateral, bivalved, aggregate, and multiflorous.

ELYOT, Sir Thomas, a gentleman eminent for learning in the 16th century, who was educated at Oxford, travelled into foreign countries, and upon his return was introduced to court. His learning recommended him to Henry VIII, who conferred the honour of knighthood on him, and employed him in several embassies; particularly in 1532, to Rome, about the divorce of queen Catharine, and afterwards to Charles V, about 1536. He wrote, *The Castle of Health*, *The Governor*, *Banquet of Sapience*, *Of the Education of Children*, *De rebus memorabilibus Angliæ*, and other books; and was highly esteemed by all his learned contemporaries.

ELYS BAY, a bay of the island of Antigua, on the N. coast, a little to the S. of Beggar's Point.

(1.) * ELYSIAN. *adj.* [*elysius*, Lat.] Pertaining to Elysium; pleasant; deliciously soft and soothing; exceedingly delightful.—

The river of life, thro' the midst of heaven,
Rolls o'er *elysian* flowers her amber stream. *Milt.*

(2.) ELYSIAN FIELDS. See ELYSIUM, § 2.

(1.) * ELYSIUM. *n. f.* [Lat.] The place assigned by the heathens to happy souls; any place exquisitely pleasant.—

To have thee with thy lips to stop my mouth,
So should'st thou either turn my flying soul,
Or I should breathe it so into thy body,

And then it liv'd in sweet *Elysium*. *Shak. H. VI.*

(2.) ELYSIUM, [ÆLIUS,] in the ancient mythology, was represented as a place in the *inferi* or lower world, furnished with fields, meads, agreeable woods, groves, shades, rivers, &c. whither the souls of good people were supposed to go after this life. Orpheus, Hercules, and Æneas, were said to have descended into Elysium in their life-time, and to have returned again; (*Virg. lib. vi. ver. 638*, &c.) Tibullus (*lib. i. eleg. 3.*) gives us fine descriptions of the Elysian fields. Virgil assigns Elysium to patriots who died for their country, to those of pure lives, to truly inspired poets, to the inventors of arts, and to all who have done good to mankind. Some authors take the fable of Elysium to have been borrowed from the Phœnicians; and suppose the name *Elysium* formed from the Phœnician *ely alay*, or *ely alats*, or *ely alas*, to rejoice, or to be in joy; the letter *a* being only changed into *e*. Others derive the word from the Greek *λυω*, *solvo*, I let loose or disengage; because here men's souls are freed or disincumbered from the fetters of the body. Beroaldus, and Hornius (*Hist. Philosoph. lib. iii. cap. 2.*) derive

derive the name from Eliza, one of the first persons who came into Greece after the deluge. The Elyfian fields were, according to some, in the Fortunate Islands on the coast of Africa. Others place them in the island of Leuce. Virgil says they were situated in Italy. According to Lucian, they were near the moon; or in the centre of the earth, if we believe Plutarch. Olaus Wormius contends that they were placed in Sweden.

*ELZE, or ELTZ. See ELTZ.

ELZEVIRS, Lewis, Bonaventure, Abraham, Lewis, and Daniel, five celebrated printers at Amsterdam and Leyden, who greatly adorned the republic of letters by many beautiful editions of the best authors of antiquity. They fell somewhat below the Stephenes in point of learning, as well as in their editions of Greek and Hebrew authors; but as to the choice of good books, they seem to have equalled, and in the neatness and elegance of their small characters, greatly to have excelled them. Their Virgil, Terence, and Greek Testament, have been reckoned their master-pieces; and are indeed to very fine, that they justly gained them the reputation of being the best printers in Europe. The first Lewis Elzevir began to be famous at Leyden in 1595, and was remarkable for being the first who observed the distinction between the *v* consonant and *u* vowel, which had been recommended by Ramus and other writers long before, but never regarded. Daniel died in 1680 or 1681; and though he left children who carried on the business, is esteemed the last of his family who excelled in it. The Elzevirs have printed several catalogues of their editions; but the last, published by Daniel, is considerably enlarged, and abounds with new books. It was printed in 12mo, at Amsterdam, in 1674, and divided into 7 volumes.

*EM. A contraction of them.—

For he could coin and counterfeit

New words with little or no wit;

And when with hasty noise he spoke 'em,

The ignorant for current took 'em. *Hudibras*.

(1.) *To EMACIATE. *v. a.* [*emacio*, Lat.] To waste; to deprive of flesh.—Men after long *emaciating* diets wax plump, fat, and almost new. *Bacon*.—All dying of the consumption, die *emaciated* and lean. *Graunt's Bills of Mortality*.

(2.) *To EMACIATE. *v. n.* To lose flesh; to pine; to grow lean.—He *emaciated* and pined away in the too anxious enquiry of the sea's reciprocity, although not drowned therein. *Brown*.

*EMACIATION. *n. f.* [*emaciatius*, Lat.] 1. The act of making lean. 2. The state of one grown lean.—Searchers cannot tell whether this *emaciation* or leanness were from a phthisis, or from a hectic fever. *Graunt*.

*EMACULATION. *n. f.* [*emaculo*, Lat.] The act of freeing any thing from spots or foulness. *Diſ*.

*EMANANT. *adj.* [*emanans*, Latin.] Issuing from something else.—The first act of the divine nature, relating to the world, and his administration thereof, is an *emanant* act: the most wise counsel and purpose of Almighty God terminate in these two great transient or *emanant* acts or works, the works of creation and providence. *Hale's Origin of Mankind*.

*To EMANATE. *v. n.* [*emano*, Lat.] To issue or flow from something else.

*EMANATION. *n. f.* [*emanatio*, Lat.] 1. The act of issuing or proceeding from any other substance.—Aristotle said, that it streamed by conatural result and *emanation* from God, the infinite and eternal Mind, as the light issues from the sun. *South*. 2. That which issues from another substance; an efflux; effluvium.—The experience of those profitable and excellent *emanations* from God, may be, and commonly are, the first motive of our love. *Taylor*.—Another way of attraction is delivered by a tenuous *emanation*, or continued effluvium, which, after some distance, retracteth unto itself; as in syrups, oils, and viscosities, which spun, at length retire into their former dimensions. *Brown*.—

Such were the features of her heavenly face;
Her limbs were form'd with such harmonious grace;

So faultless was the frame, as if the whole
Had been an *emanation* of the soul. *Dryden*.
—The letters, every judge will see, were by no means efforts of the genius, but *emanations* of the heart. *Pope*.—

Each *emanation* of his fires
That beams on earth, each virtue he inspires;
Each art he prompts, each charm he can create
Whate'er he gives, are giv'n for you to hate.

*EMANATIVE. *adj.* [from *emano*, Lat.] Issuing from another. *Diſ*.

*To EMANCIPATE. *v. a.* [*emancipo*, Latin] To set free from servitude; to restore to liberty.—Having received the probable inducements of truth, we become *emancipated* from testimonial engagements. *Brown*.—By the twelve tables, on those were called unto the intestate succession their parents that were in the parents power, including all *emancipated* children. *Ayliffe's Parergon*.—They *emancipated* themselves from dependence. *Arbutnot*.

(I.) *EMANCIPATION. *n. f.* [from *emancipate*] The act of setting free; deliverance from slavery.—Obstinacy in opinions holds the dogmatist in the chains of error, without hope of *emancipation*. *Glanville's Scepſis*.

(II.) EMANCIPATION, in the Roman law, the setting free a son from the subjection of his father so that whatever moveables he acquires belong to property to him, and not to his father, as before emancipation. Emancipation puts the son in a capacity of managing his own affairs, and of marrying without his father's consent, though a minor. Emancipation differs from MANUMISSION, as the latter was the act of a master in favour of a slave whereas the former was that of a father in favour of his son. There were two kinds of emancipation; viz.

1. EMANCIPATION EXPRESS, where the father declared before a judge, that he emancipated his son. In performing this, the father was first to sell his son imaginarily to another, whom they called *pater ſiduciarius*, father in trust; of whom being bought back again by the natural father, he manumitted him before the judge by a verbal declaration.

2. **EMANCIPATION TACIT**, by the son's being promoted to some dignity, by his coming of age, or by his marrying, in all which cases he became his own master of course.

* **To EMARGINATE**. *v. a.* [*margo*, Lat.] To take away the margin or edge of any thing. *Diſc.*

EMARGINATED, among botanists. See **BOTANY**, *Glossary*.

* **To EMASCULATE**. *v. a.* [*emasculo*, Latin.]

1. To castrate; to deprive of virility.—When it is found how many ewes, suppose twenty, one ram will serve, we may geld nineteen, or thereabouts; for if you *emasculate* but ten, you shall, by promiscuous copulation, hinder the increase. *Graunt*.

2. To effeminate; to weaken; to vitiate by unmanly softness.—

Frogs wars and from affairs of state abstain;
Women *emasculate* a monarch's reign. *Dryden*.
—Dangerous principles impose upon our understandings, *emasculate* our spirits, and spoil our temper. *Collier*.

(1.) * **EMASCULATION**. *n. f.* [from *emasculo*.] 1. Castration. 2. Effeminacy; womanish qualities; unmanly softness.

(2.) **EMASCULATION**. See **CASTRATION**, and **EUNUCH**.

EMAUS. See **EMMAUS**.

* **To EMBALE**. *v. a.* [*emballer*, French.] 1. To make up into a bundle. 2. To bind up; to enclose.—

Below her ham her weed did somewhat train,
And her straight legs most bravely were *embal'd*
In golden buskins of costly cordwain.

Fairy Queen.

* **To EMBALM**. *v. a.* [*embaumer*, French; *embalsamar*, Spanish.] To impregnate a body with aromatics, that it may resist putrefaction.—

Embalm me,
Then lay me forth; although unqueen'd, yet like
A queen, and daughter to a king, inter me.

Shakespeare.

I would shew future times
What you were, and teach them t'urge towards such:

Verse *embalms* virtue, and tombs or thrones
of rhymes,

Preserve frail transitory fame as much
As spice doth bodies from corrupt air's touch.

Donne.

Muse! at that name thy sacred sorrows shed;
Those tears eternal that *embalm* the dead.

Pope.

* **EMBALMER**. *n. f.* [from *embalm*.] One that practises the art of embalming and preserving bodies.—The Romans were not so good *embalmers* as the Egyptians, so the body was utterly consumed. *Bacon's Natural History*.

EMBALMING is the opening a dead body, taking out the intestines, and filling the place with odoriferous and desiccative drugs and spices, to prevent its putrefying. The Egyptians excelled all other nations in the art of preserving bodies from corruption; for some, that they have embalmed upwards of 2000 years ago, remain whole to this day, and are often brought into other countries as great curiosities. Their manner of

embalming was thus: They scooped the brain with an iron scoop out at the nostrils, and threw in medicaments to fill up the vacuum: they also took out the entrails, and having filled the body with myrrh, cassia, and other spices, except frankincense, proper to dry up the humours, they pickled it in nitre, where it lay soaking for 70 days. The body was then wrapped up in bandages of fine linen and gums, to make it stick like glue; and so was delivered to the kindred of the deceased, entire in all its features, the very hairs of the eye-lids being preserved. They used to keep the bodies of their ancestors, thus embalmed, in little houses magnificently adorned, and took great pleasure in beholding them, alive as it were, without any change in their size, features, or complexion. The Egyptians also embalmed birds, &c. The prices for embalming were different; the highest was a talent, the next 29 minæ, and so decreasing to a very small matter; but they who had not wherewithal to answer this expence, contented themselves with infusing, by means of a syringe, through the fundament, a certain liquor extracted from the cedar; and leaving it there, wrapped up the body in salt of nitre: the oil thus preyed upon the intestines, so that when they took it out, the intestines came away with it, dried, and not in the least putrefied: the body being enclosed in nitre, grew dry, and nothing remained besides the skin glued upon the bones. The method of embalming used by the modern Egyptians, according to Maillet, is to wash the body several times with rose water, which he elsewhere observes, is more fragrant in that country than with us; they afterwards perfume it with incense, aloes, and other odours, of which they are by no means sparing; and then they bury the body in a winding sheet, made partly of silk and partly of cotton, and moistened, as is supposed, with some sweet scented water or liquid perfume, though Maillet uses only the term *moistened*; this they cover with another cloth of unmixed cotton, to which they add one of the richest suits of clothes of the deceased. The expence, he says, on these occasions, is very great, though nothing like what the genuine embalming cost in former times.

* **To EMBAR**. *v. a.* [from *bar*.] 1. To shut; to enclose.—

Themselves for fear into his jaws to fall,
He forc'd to castle strong to take their flight;
Where fast *embar'd* in mighty brazen wall,
He has them now four years besieg'd to make
their thrall.

Spenser.

In form of airy members fair *embar'd*
His spirits pure were subject to our sight.

Fairfax.

2. To stop; to hinder by prohibition; to block up.—Translating the mart unto Calais, he *embarc'd* all further trade for the future. *Bacon's Henry VII.*—

If this commerce 'twixt heav'n and earth were
not

Embar'd, and all this traffick quite forgot,
She, for whose loss we have lamented thus,
Would work more fully and pow'rfully on us.

Donne.

EMBARCADERO, in commerce, a Spanish
term,

term, much used along the coasts of America, particularly those on the South Sea; signifying a place which serves some other city farther within land, as a port, for embarking and disembarking commodities. Thus Calamo is the embarcadero of Lima, the capital of Peru; and Arica the embarcadero of Potosi. There are some embarcaderos 40, 50, and even 60 leagues off the city, which they serve in that capacity.

* **EMBARCATION.** *n. f.* [from *embark.*] 1. The act of putting on shipboard.—The French gentlemen were very solicitous for the *embarcation* of the army, and for the departure of the fleet. *Clarendon.* 2. The act of going on shipboard.

(1.) * **EMBARGO.** *n. f.* [*embargar*, Spanish.] A prohibition to pass; in commerce, a stop put to trade.—He knew that the subjects of Flanders drew so great commodity from the trade of England, as by *embargo* they would soon wax weary of Perkin. *Bacon's Henry VII.*—After an *embargo* of our trading ships in the river of Bourdeaux, and other points of sovereign affront, there did succeed the action of Rheez. *Wotton.*—I was not much concerned, in my own particular, for the *embargo* which was laid upon it. *Dryden.*

(2.) An **EMBARGO** is an arrest on ships or merchandise, by public authority; or a prohibition of state, commonly on foreign ships, in time of war, to prevent their going out of port, sometimes to prevent their coming in, and sometimes both for a limited time. The king may lay *embargoes* on ships, or employ those of his subjects, in time of danger, for the service and defence of the nation; but they must not be for the private advantage of a particular trader or company; and therefore a warrant to stay a single ship is no legal *embargo*. No inference can be made from *embargoes* which are only in time of war, and are a prohibition by advice of council, and not at prosecution of parties. If goods be laden on board, and after an *embargo* or restraint from the prince or state comes forth, and then the master of the ship breaks ground, or endeavours to sail, if any damage accrues, he must be responsible for the same; the reason is, because his freight is due, and must be paid, even though the goods be seized as contraband.

(1.) * **TO EMBARK.** *v. a.* [*embarquer*, French.]

3. To put on shipboard.—

Of mankind, so numerous late,

All left, in one small bottom swam *embark'd*. *Milton.*

—The king had provided a good fleet, and caused a body of 3000 foot to be *embarked* on those ships. *Clarendon.*

Straight to the ships *Aeneas* took his way,
Embark'd his men, and skim'd along the sea.

Dryden's Æn.

2. To engage another in any affair.

(2.) * **TO EMBARK.** *v. n.* 1. To go on shipboard.—

I should with speed *embark*,

And with their *embassy* return to Greece.

A. Phillips.

2. To engage in any affair.

* **TO EMBARRASS.** *v. a.* [*embarrasser*, Fr.] To perplex; to distress; to entangle.—I saw

my friend a little *embarrassed*, and turned away. *Spektor.*

* **EMBARRASSMENT.** *n. f.* [from *embarrass.*] Perplexity; entanglement.—Let your method be plain, that your hearers may run through it without *embarrassment*, and take a clear view of the whole. *Wat's Logic.*

* **TO EMBASE.** *v. a.* [from *base.*] 1. To vitiate; to depauperate; to lower; to deprive; to impair.—Grains are annual, so that the virtue of the seed is not worn out; whereas in a tree it is *embased* by the ground. *Bacon.*—I have no service ignoble end in my present labour, which may, on either side, restrain or *embase* the freedom of my poor judgment. *Wotton.*—I will rather chafe to wear a crown of thorns, than to exchange that gold for one of lead, whose *embased* flexibility shall be forced to bend. *King Charles.*—A pleasure high, rational, and angelical; a pleasure *embased* with no appendant sting; but such a one as best honey in the mouth, never turns to gall or graveness in the belly. *South.* 2. To degrade; to vitiate.

Joy of my life, full off for loving you

I bless my lot, that was so lucky plac'd;

But then the more your own mishap I rue

That are so much by so mean love *embas'd*. *Spenser.*

* **EMBASSADOR.** *n. f.* [See **AMBASSADOR**.] One sent on a publick message.—

Mighty Jove's *ambassador* appear'd

With the same message. *Deane.*

Myself, my king's *ambassador* will go. *Dryden.*

* **EMBASSADRESS.** *n. f.* A woman sent on a publick message.—

With fear the modest matron lifts her eye
And to the bright *embassadress* replies. *Garth's On*

* **EMBASSAGE.** *n. f.* [It may be observed

* **EMBASSY.** [that though our authors write almost indiscriminately *ambassador* or *ambassador*, *embassage*, or *ambassage*; yet there is scarcely an example of *ambassy*, all concurring to write *embassy*.] 1. A publick message; a message concerning business between princes or states.—

Fresh *embassy* and suits,

Nor from the state nor private friends, hear
ter,

Will I lend ear to. *Shakef. Coriolanus.*

—When he was at Newcastle he sent a *sole embassy* unto James king of Scotland, to treat and conclude a peace with him. *Bacon's Henry VII.*

The peace polluted thus, a chosen band

He first commissions to the Latian land,

In threat'ning *embassy*. *Dryden's*

2. Any solemn message.—He sends the angelic *embassies* with his decrees. *Taylor.* 3. An embassy in an ironical sense.—A bird was made fly by such art to carry a written *embassage* among ladies, that one might say, If a live bird, taught? If dead, how made? *Sidney.*

Nimble mischance, that art so light of foot
Doth not thy *embassage* belong to me;

And am I last that know it? *Shakef. Richard III.*

(1.) * **TO EMBATTLE.** *v. a.* [from *battle*.] To range in order or array of battle.—

The English are *embattled*;

To horse! you gallant princes, strait to horse. *Shakef. Richard III.*

—I could drive her from the ward of her reputation, her marriage-vow, and a thousand other her letrances, which now are too strongly embattled gainst me. *Shakespeare.*—

On their embattl'd ranks the waves return,
And overwhelm the war. *Milton's Par. Lost.*

Embattl'd nations strive in vain
The hero's glory to restrain:
Streams arm'd with rocks, and mountains red
with fire,
In vain against his force conspire. *Prior.*

(2.) * TO EMBATTLE. *v. n.* To be ranged in little array.—

The night

Is shiny, and they say we shall embattle
By the second hour of the morn. *Shakespeare.*
* TO EMBAY. *v. a.* [from *baigner*, to bathe, *rench.*] 1. To bathe; to wet; to wash. Not
fed.—

In her lap a little babe did play
His cruel sport;
For in her streaming blood he did embay
His little hands, and tender joints embrew. *Fairy Queen.*

Every sense the humour sweet embay'd,
And slumb'ring soft, my heart did steal away. *Fairy Queen.*

[From bay.] To inclose in a bay; to land
it.—

If that the Turkish fleet
Be not inshelter'd and embay'd, they're down'd. *Shakespeare.*

(1.) EMBDEN, a county of Germany, in the
rde of Westphalia, called also EAST FRIES-
LAND, containing several towns and villages.

(2.) EMBDEN, a strong city, the capital of the
sve county, seated on the E. side of the Embe,
in the N. Sea. It is divided into three parts;
1. the Old Town, the *Faldren*, and the two
burbs. It has a good town-house, cathedral and
iblic library. The majority of the people are
hwnists, who have 3 churches. Roman Catho-
n, Lutherans, Mennonists and Jews, have also
aces for worship in it. It is a free port, and
as formerly under the protection of the United
nvinces; but in 1744, the States sold their right
to the king of Prussia. It lies 23 miles NE. of
toningen. Lon. 7. 5. E. Lat. 53. 26. N.

* TO EMBELLISH. *v. a.* [embellir, French.]
to adorn; to beautify; to grace with ornaments;
to decorate.—

How much more beauteous had the fountain
been,

Embellish'd with her first created green;
Where crystal streams through living turf had
run,

Contented with an urn of native stone.

Dryden's Juvenal.

—The names of the figures that embellished the
discourses of those that understood the art of speak-
ing, are not the art and skill of speaking well.
Locke.—That which was once the most beautiful
spot of Italy, covered with palaces, embellished by
emperors, and celebrated by poets, has now no-
thing to shew but ruins. *Addison on Italy.*

* EMBELLISHMENT. *n. s.* [from *embellish*.]
Ornament; adventitious beauty; decoration; ad-

ditions grace; any thing that confers the power
of pleasing.—

Cultivate the wild licentious savage
With wisdom, discipline, and liberal arts,
The embellishments of life. *Addison's Cato.*

—Apparitions, visions, and intercourses of all
kinds between the dead and the living, are the
frequent and familiar embellishments of the legends
of the Romish church. *Atterbury.*

EMBER-COURT, a village in Surry.

EMBER-DAYS. See EMBER-WEEK, § 1.

* EMBERING. *n. s.* The ember days. A
word used by old authors, now obsolete.—

For cause good for many ways,

Keep emb'rings well, and fasting days;

What law commands, we ought to obey,

For Friday, Saturn, and Wednesday. *Tusser.*

EMBERIZA, in ornithology, a genus of birds
belonging to the order of passerres. The bill is
conical, and the mandibles recede from each o-
ther towards the base; the inferior mandible has
the sides narrowed inwards, but the upper one is
still narrower. There are about 60 species; of
which two are represented on Plate CXXXV, fig-
2 and 3. viz. the *Black-throated Bunting*, a native
of America, and the *Cinereous Bunting* of Canada.
The most remarkable species are,

1. EMBERIZA CITRINELLA, the YELLOW-HAM-
MER, with a blackish tail, only the two outward
side-feathers are marked on the inner edge with a
sharp white spot. It is a bird of Europe, and
comes about houses in winter: it builds its nest
on the ground on meadows.

2. EMBERIZA HORTULANA, the ORTOLAN, has
black wings; the first 3 feathers on the tail are
white on the edges, only the two lateral are black
outwardly. The orbits are naked and yellow:
the head is greenish, and yellow towards the in-
ferior mandible. It feeds principally upon the pa-
nick grass; grows very fat; and is reckoned a de-
licate morsel by certain epicures, especially when
fattened artificially. These birds are found in se-
veral parts of Europe, but are not met with in
Britain; they are common in France and Italy,
and some parts of Germany and Sweden, migra-
ting from one to the other in spring and autumn;
and in their passage are caught in numbers, and
fattened for the table. They sometimes sing very
prettily, and are often kept for that purpose. The
song is not unlike that of the yellow-hammer, but
finer and sweeter. In some parts it makes the nest
in a low hedge; in others, on the ground. It is
carelessly constructed, not unlike that of the lark.
The female lays 4 or 5 greyish eggs, and in gene-
ral has two broods in a year. To fatten these
birds for the table, they are placed in a chamber
lightened by lanterns; where, not knowing the
vicissitudes of day and night, they are constantly
fed with oats and millet; and grow so fat, that
they would certainly die if not killed in a critical
minute. They are a mere lump of fat; of a most
exquisite taste, but apt soon to satiate. Both their
Greek and Latin names are derived from their
food, the millet. Aristotle calls them *cynobromi*;
and the Latins, *miliaria*. The latter fattened
them in their *ornithobones*, or fowl-yards, as the I-
talians do at present; which the ancients construc-
ted

ted with the utmost magnificence, as well as convenience.

3. *EMBERIZA MILIARIS*, the GREY EMBERIZA, is of a greyish colour, spotted with black in the belly, and the orbits are reddish. It is the bunting of English authors, and a bird of Europe.

4. *EMBERIZA NIVALIS*, the great pyed mountain finch of Ray, and the snow bird of Edwards, has white wings, but the outer edge of the prime feathers are black; the tail is black, with three white feathers on each side. These birds are called in Scotland SNOW-FLAKES, from their appearance in hard weather and in deep snows. They arrive in that season among the Cheviot hills, and in the Highlands, in amazing flocks. A few breed in the Highlands, on the summit of the highest hills, in the same places with the *parmigans*; but the greatest numbers migrate from the extreme north. They appear in the Shetland islands; then in the Orkneys; and multitudes of them often fall, wearied with their flight, on yessels in the Pentland Firth. Their appearance is a certain fore-runner of hard weather, and storms of snow, being driven by the cold from their common retreats. Their progress southward is supposed to be thus; Spitzbergen and Greenland, Hudson's Bay, the Lapland Alps, Scandinavia, Iceland, the Ferroe Isles, Shetland, Orkneys, Scotland, and the Cheviot hills. They visit at that season all parts of the northern hemisphere, Prussia, Austria, and Siberia. They arrive lean, and return fat. In Austria, they are caught and fed with millet, and, like the ortolan, grow excessively fat. In their flights, they keep very close to each other, mingle most confusedly together, and fling themselves collectively into the form of a ball; at which instant the fowler makes great havock among them.

5. *EMBERIZA ORYZIVORA*, or the RICE BUNTING, with the head and whole under side of the body black; hind part of the neck in some pale yellow, and in others white; coverts of the wings and primaries, black, the last edged with white; part of the scapulars, lesser coverts of the wings, and rump, white; back black, edged with dull yellow; tail of the same colours, and each feather sharply pointed; the legs are red. The head, upper part of the neck, and back, of the female, is yellowish brown, spotted with black; the under part, of a dull yellow; the sides thinly streaked with black. These birds are very numerous in the island of Cuba, where they commit great ravages among the early crops of rice, which precede those of Carolina. As soon as the crops of that province are to their palate, they quit Cuba, and pass over the sea, in numerous flocks, directly north; and are very often heard in their passage by sailors frequenting that course. Their appearance is in September, while the rice is yet milky; and they commit such devastations, that 40 acres of that grain have been totally ruined by them in a short time. They arrive very lean: but soon grow so fat, as to fly with difficulty; and, when shot, often burst with the fall. They continue in Carolina not much above 3 weeks, and retire when the rice begins to harden. They come in-

to Rhode Island and New York in the end of April, or the 2d week in May, frequenting the borders of fields, and living on insects, &c. till the maize is ready; when they begin by pecking holes in the sides of the husks, and after satiating themselves, go on to another; which leaves room for the rain to get in, and effectually spoils the plant. They continue there during the summer, and breed; returning, as autumn approaches, to the southward. The males and females do not arrive together; the females come first.—They are esteemed the most delicate birds of those parts, and the male is said to have a fine note. This species is known in the country by the names *bob lincoln* and *conquerdie*; likewise called by the *white-backed maize-thief*.

6. *EMBERIZA SCHOENICLAS*, the REED SPARROW, has a black head, a blackish grey back, and a white spot on the quill feathers. It inhabits marshy places, most commonly among reeds. Its nest is very artfully contrived, being fastened in 4 reeds, and suspended by them like a hammock, about three feet above the water; the cavity the nest is deep but narrow; and the materials are bushes, fine bents, and hairs. It lays 4 or 5 eggs of a bluish white, marked with irregular purple veins, especially on the larger end. This bird much admired for its song; and, like the nightingale, it sings in the night.

* *EMBERS. n. f.* without a singular. [empe, Saxon, ashes; *emmyria*, Islandick, hot ashes, cinders.] Hot cinders; ashes not yet extinguished.—Take hot *embers*, and put them about a bottle filled with new beer, almost to the very neck; let the bottle be well stopped, lest it fly out; and continue it, renewing the *embers* every day, the space of ten days. *Bacon's Natural History*.

If the air will not permit,

Some still removed place will fit,
While glowing *embers* through the room
Teach light to counterfeit a gloom.

While thus heav'n's highest counsels, by
low

Footsteps of their effects, he trac'd too well
He tolt his troubled eyes, *embers* that gleam
Now with new rage, and wax too hot for

He said, and rose, as holy zeal inspires;
He rakes hot *embers*, and renews the fires.

Dryden's Virg.

(1.) * *EMBER-WEEK. n. f.* [The original of this word has been much controverted: some derive it from *embers* or ashes strewed by penitents on their heads; but *Nelson* decides in favour of *Mareschal*, who derives it from *ymbren* or *emben*, a course or circumvolution.] A week in which ember day falls.—The ember days at the four seasons are the Wednesday, Friday, and Saturday after the first Sunday in Lent, the feast of Pentecost, September 14, December 13. *Common Prayer*.—Stated times appointed for fasting in Lent, and the four seasons of the year called *bereweeks. Ayliffe's Parergon*.

(2.) *EMBER WEEKS*, by the canonists, are called *quatuor anni tempora*, the four cardinal seasons, on which the circle of the year turns: and

once Henshaw takes the word to have been formed, viz. by corruption, from *tempora*. They are chiefly taken notice of, on account of the ordination of priests and deacons; because the canon appoints the Sundays next succeeding the ember weeks, for the solemn times of ordination; though the bishops may ordain on any Sunday or Friday.

* **TO EMBEZZLE.** *v. a.* [This word seems corrupted by an ignorant pronunciation from *imidi*.] 1. To appropriate by breach of trust; to what is intrusted in his hands to his own use. He had *embezzled* the king's treasure, and expended money by way of loan from all men. *Hayward.* 2. To waste; to swallow up in riot.—

When thou hast *embezzl'd* all thy store,
Where's all thy father left? *Dryden's Pers.*

* **EMBEZZLEMENT.** *n. f.* [from *embezzle*.] The act of appropriating to himself that which received in trust for another. 2. The thing appropriated.

EMRHAMS, a village in Surry.

* **TO EMBLAZE.** *v. a.* [*blasfomer*, French.] To adorn with glittering embellishments.—

Th' unfought diamonds
Would so *emblaze* the forehead of the deep,
And so bestud with stars, that they below
Would grow inur'd to light. *Milton.*

No weeping orphan saw his father's stores
For crimes irradiate, or *emblaze* the floors. *Pope.*
To blazon; to paint with ensigns armorial.—

Nor shall this blood be wiped from thy point,
But thou shalt wear it as a herald's coat,
Th' *emblaze* the honour which thy master got.

Shakef.

He from the glittering staff unfurl'd
Th' imperial ensign, streaming to the wind,
With gems and golden lustre rich *emblaz'd*,
Graphick arms and trophies. *Milt. Par. Lost.*

* **TO EMBLAZON.** *v. a.* [*blasfomer*, French.] To adorn with figures of heraldry; to grace with ensigns armorial. 2. To deck in glaring colours; to set out pompously to shew.—We find Julius, for some petty conquest, *emblazoned* the poets to the highest pitch. *Hakewill on residence.*

* **EMBLAZONRY.** *n. f.* [from *emblazon*.] Stores upon shields.—

Him round
A globe of fiery seraphim inclos'd
With bright *emblazonry* and horrent arms.

Johnson.

(1.) * **EMBLEM.** *n. f.* [*εμβλημα*.] 1. Inlay; enamel; any thing inserted into the body of another. 2. An occult representation; an allusive figure; a typical designation.—

She had all the royal makings of a queen,
The rod, and bird of peace, and all such *emblems*,

Laid nobly on her. *Shakef. Henry VIII.*
If you draw your beast in an *emblem*, shew a
escape of the country natural to the beast.
Webster on Drawing.

Gentle Thames,
Thy mighty master's *emblem*, in whose face
State meekness, heighten'd with majestic grace.
Denham.

—He is indeed a proper *emblem* of knowledge and action, being all head and paws. *Addison's Guardian.*

(2.) **AN EMBLEM,** (§ 1. *def.* 2.) is a kind of painted *zenigma*, which, representing some obvious history, with reflections underneath, instructs us in some moral truth. See **ZENIGMA**, **DEVISE**, &c. Such is that very significant image of Scævola holding his hand in the fire; with the words, "*Agere et pati fortiter Romanum est*, To do and suffer courageously is Roman." The emblem is somewhat plainer than the *zenigma*.—Gale defines emblem an ingenious picture, representing one thing to the eye, and another to the understanding. The Greeks also gave the name **EMBLEMS**, *εμβλήματα*, (from *εμβαλλειν*, to insert,) to inlaid or Mosaic works, and even to all kinds of ornaments of vases, moveables, garments, &c. And the Latins used *emblemata* in the same sense. Accordingly, Cicero reproaching Verres with having plundered statues and fine wrought works from the Sicilians, calls the ornaments fixed to them (and which on occasion might be separated,) *emblemata*. Latin authors frequently compare the figures and ornaments of discourse to these *emblemata*. With us, emblem ordinarily signifies no more than a painting, basso-relievo, or other representation, intended to hold forth some moral or political instruction. What distinguishes an emblem from a devise is, that the words of an emblem have a full complete sense of themselves; nay, all the sense and signification which they have together with the figure. But there is a yet further difference between emblem and devise: for a devise is a symbol appropriated to some person, or that expresses something which concerns him particularly; whereas an emblem is a symbol that regards all the world alike. These differences will be more apparent, from comparing the emblem above quoted, with the devise of a candle lighted, and the words *Alis in serviendo consumor*, "I waste myself in serving others."

* **TO EMBLEM.** *v. a.* [from the noun.] To represent in an occult or illusive manner. Not used.—The primitive sight of elements doth fitly *emblem* that of opinions. *Glanville's Sceptis.*

* **EMBLEMATICALLY.** *adv.* [from *emblematical*.] In the manner of emblems; allusively; with occult representation.—Others have spoken *emblematically* and hieroglyphically, as to the Egyptians; and the phoenix was the hieroglyphick of the sun. *Brocun's Vulgar Errors.*—He took a great stone, and put it under the oak, *emblematically* joining the two great elements of masonry. *Swift.*

* **EMBLEMATICAL.** } *adj.* [from *emblem*.]

* **EMBLEMATICK.** } 1. Comprising an emblem; allusive; occultly representative.—

In the well fram'd models,
With *emblematick* skill and mystick order,
Thou shew'd'st where tow'rs on battlements
should rise,

Where gates should open, or where walls should
compass. *Prior.*

—The poets contribute to the explication of reverses purely *emblematical*, or when the persons are allegorical. *Addison.* 2. Dealing in emblems; using emblems.—

Bytongue and pudding, to our friends explain
What does your *emblematick* worship mean.

Prior.

* **EMBLEMATIST.** *n. f.* [from *emblem*.] Writers or inventors of emblems.—These fables are still maintained by symbolical writers, *emblematisfs*, and heralds. *Brown's Vulgar Errors.*

EMBLETON, a village in Cumberland, SE. of Cockermouth.

EMBLICHEIM, a town of Germany, in the circle of Westphalia, and county of Bentheim, 10 miles NNW. of Nienhus.

EMBO, a village of Scotland, on the E. coast of Sutherlandshire, near Brora. The last sacrifice to superstition in Scotland, by burning a woman for the supposed crime of witchcraft, was performed here in 1727.

EMBOLI, a town of European Turkey, in the province of Romania. It is called by the Christians *Christopolis*; but is little better than a heap of ruins. It is 48 miles E. of Saloniki.

EMBOLIMÆUS. See **EMBOLISM.** § 2.

(1.) * **EMBOLISM.** *n. f.* [*ἐμβολισμός*.] 1. Inter-calculation; insertion of days or years to produce regularity and equation of time.—The civil constitutions of the year were after different manner in several nations; some using the sun's year, but in divers fashions; and some following the moon, finding out *embolisms* or equations, even to the addition of whole months, to make all as even as they could. *Holder on Time.* 2. The time inserted; intercalary time.

(2.) **EMBOLISM.** } the lunar year, which is only 354 days, in order to bring it to the solar, which is 365 days, they had every 2 or 3 years an embolism, i. e. they added a 13th lunar month every 2d or 3d year, which additional month they called *ἐμβολισμῶς*, *embolismæus*, because inserted, or intercalated.

* **EMBOLUS.** *n. f.* [*ἐμβολός*.] Any thing inserted and acting in another, as the sucker in a pump.—Our members make a sort of an hydraulick engine, in which a chemical liquor, resembling blood, is driven through elastick channels by an *embolus*, like the heart. *Arbutnot.*

EMBOLY, or **EMBOLI.** See **EMBOLI.**

* **To EMBOSS.** *v. a.* [from *bosse*, a protuberance, French.] 1. To form with protuberances; to cover with something rising into lumps or bunches.—

Timon hath made his everlasting mansion
Upon the beached verge of the salt flood;
Which once a-day, with his *embossed* froth,
The turbulent surge shall cover. *Shaksp. Timon.*

Thou art a bike,
A plague sore, or *embossed* carbuncle,
In my corrupted blood. *Shaksp. K. Lear.*
Botches and blains must all his flesh *emboss*,
And all his people. *Milt. Par. Lost.*

All crowd in heaps, as at a night-alarm
The bees drive out upon each other's backs,
T' *emboss* their hives in clusters.

Dryden's Don Sebastian.

2. To engrave with relief, or rising work.—

Then o'er the lofty gate his art *emboss'd*
Androgeo's death, and off'rings to his ghost.
Dryden's Virgil.

3. [from *emboïsser*, French, to inclose in a box.] To inclose; to include; to cover.—

The knight his thrilant spear again affay'd
In his brais-plated body to *emboss*. *Spenser.*
And in the way, as she did weep and wail,
A knight her met, in mighty arms *emboss'd*. *Fairy Queen.*

4. [*emboscare*, Italian.] To inclose in a thicket.—
Like that self-begotten bird

In th' Arabian woods *emboss*. *Milt. Agonist.*

5. To hunt hard.—When a deer is hard run, as foams at the mouth, he is said to be *emboss*: dog also, when he is strained with hard running especially upon hard ground, will have his nose swelled, and then he is said to be *emboss*, *bosse*, French, a tumour. *Hammer.*

Oh, he is more mad
Than Telamon for his shield; the boar of Th
faly

Was never so *emboss*. *Shaksp.*
—We have almost *emboss* him: you shall see
fall to-night. *Shaksp.peare.*

EMBOSSING, or **IMBOSSING**, in architecture and sculpture, the forming or fashioning work in relievo, whether cut with a chisel or otherwise. Embossing is a kind of sculpture, wherein the figures stick out from the plane whereon it is done, and according as the figures are more or less prominent, they are said to be in alto, mezzo, basso, relievo; or high, mean, or low, relief.

ENCHASING.

* **EMBOSSMENT.** *n. f.* [from *emboss*.] 1. A thing standing out from the rest; jut; eminent.—I wish also, in the very middle, a fair moat with three ascents and alleys, enough for foot-walk a-breast; which I would have to be per-circles, without any bulwarks or *embossments*. *con's Essays.* 2. Relief; rising work.—They at a loss about the word pendentis; some time expresses only the great *embossment* of the helmet, others believe it hung off the helmet in alto-lievo. *Addison on Italy.*

EMBOTHRUM, in botany: A genus of monogynia order, belonging to the tetrad-clas of plants. There is no calyx; the corolla consists of 4 linear oblique petals; the stamens four very short filaments; the anther is large, oblong, and seated within the cavity of petal. The pericarpium is a round unilocular licle, sharpened at both ends; the seeds are 4 or 5 in number, egg-shaped, and compressed.

* **To EMBOTTLE.** *v. a.* [*bouteille*, French.] To include in bottles; to bottle.—

Stirom, firmest fruit
Embottled, long as Priamean Troy
Withstood the Greeks, endures. *Plin.*

* **To EMBOWEL.** *v. a.* [from *bowel*.] To vicerate; to deprive of the entrails; to excise rate.—

The schools,
Embowelled of their doctrine, have left off
The danger to itself.

Embowelled will I see thee by and by;
'Till then, in blood, by noble Percy lye. *Shaksp. Henry 8.*

The roar
Embowell'd with outrageous noise the air,
And all her entrails tore. *Milt. Par. Lost.*

Fossils and minerals that th' *embovell'd* earth
Displays. *Philips.*

* **EMBRACE.** *n. f.* [from the verb] 1. Clasp;
fond pressure in the arms; hug.—

Thames, the most lov'd of all the ocean's sons
By his old sire, to his *embraces* runs. *Denham.*
1. An hostile squeeze; crush.

(1.) * **TO EMBRACE.** *v. a.* [*embrasser*, French.]
To hold fondly in the arms; to squeeze in
indignity.—

Embrace again, my sons! be foes no more;
Nor stain your country with her children's gore.
Dryden.

To seize ardently or eagerly; to lay hold on;
welcome; to accept willingly any thing of-
fended.—

I take it, your own business calls on you,
And you *embrace* th' occasion to depart. *Shaksf.*

At first, her mother earth the holdeth dear,
And doth *embrace* the world, and worldly
things. *Davies.*

They who are represented by the wise virgins,
placed the profession of the Christian religion,
the foolish virgins also had done. *Tillotson.* 3.
comprehend; to take in: as, *natural philosophy*
embraces many sciences. 4. To comprise; to
close; to contain; to encompass; to encircle.—

Low at his feet a spacious plain is plac'd,
Between the mountain and the stream *embrac'd*.
Denham.

To admit; to receive —
Fenton, Heav'n give thee joy!

What cannot be eschew'd, must be *embrac'd*.
Shaksf.

If a man can be assured of any thing, without
being examined, what is there that he may not
brace for truth? *Locke.* 6. To find; to take.—

Fleance, his son,
Whose absence is no less material to me
Than is his father's, must *embrace* the fate
Of that dark hour. *Shaksf. Macbeth.*
To squeeze in a hostile manner.

(1.) * **TO EMBRACE.** *v. n.* To join in an em-
brace.—

Let me *embrace* with old Vincentio;
And wander we to see thy honest son,
Who will of thy arrival be full joyous. *Shaksf.*

* **EMBRACEMENT.** *n. f.* [from *embrace*.] 1.
asp in the arms; hug; embrace.—

Thus death becomes a rival to us all,
And hopes with foul *embracements* her to get,
In whose decay virtue's fair shrine must fall.
Sidney.

There cherishing one another with dear, though
all *embracements*, with sweet, though cold kiss,
it might seem that Love was come to play
there without darts. *Sidney.* 2. Hostile hug;
apple.—These beasts, fighting with any man,
and upon their hinder feet, and so this did, be-
ready to give me a shrewd *embracement*. *Sid-*
3. Comprehension.—

Nor can her wide *embracements* filled be.
Davies.

State of being contained; inclosure.—The parts
man's body easily reparable, as spirits, blood,
and flesh, die in the *embracements* of the parts
easily reparable, as bones, nerves, and mem-
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branes. *Bacon's Natural History.* 5. Conjugal en-
dearment.—I would freelier rejoice in that ab-
sence, wherein he won honour, than in the *em-*
bracements of his bed, where he would shew most
love. *Shaksf. Coriolanus.*

* **EMBRACER.** *n. f.* [from *embrace*.] The per-
son embracing.—Yet are they the greatest *embra-*
cers of pleasure of any other upon earth; and they
esteem of pearls as pebbles, so they may satisfy
their gust, in point of pleasure or revenge. *Howel.*

(1.) * **EMBRASURE.** *n. f.* [*embrasure*, Fr.]
An aperture in the wall, through which the can-
non is pointed; battlement.

(2.) **EMBRASURE**, in architecture, the enlarge-
ment made of the aperture of a door or window,
on the inside of the wall; its use being to give the
greater play for the opening of the door or cas-
ement, or to admit the more light.

* **TO EMBRAVE.** *v. a.* [from *brave*.] To de-
corate; to embellish; to deck; to grace; to adorn.
Not now in use.—

So, both agree their bodies to engrave;
The great earth's womb they open to the sky,
And, with sad cypress, seemly it *embrace*.
Fairy Queen.

EMBRHUEREN, a town of Germany, in the
circle of Westphalia, and bishopric of Munster,
10 miles NNW. of Rheine.

* **TO EMBROCATE.** *v. a.* [*ἐμβροχέω*.] To rub
any part diseased with medicinal liquors.—I re-
turned her a glass with oil of roses and vinegar, to
embrocate her arm. *Wifeman on Inflammations.*

(1.) * **EMBROCATION.** *n. f.* [from *embro-*
cate.] 1. The act of rubbing any part diseased
with medicinal liquors or spirits. 2. The lotion
with which any diseased part is washed or embro-
cated.—We endeavoured to ease by discutient and
emollient cataplasms, and *embrocations* of various
sorts. *Wifeman's Surgery.*

(2.) **AN EMBROCATION**, in surgery and phar-
macy, is an external kind of remedy, which consists
in an irrigation of the part affected, with some
proper liquor, as oils, spirits, &c. by means of
a woollen or linen cloth, or a sponge, dipped in
the same.

* **TO EMBROIDER.** *v. a.* [*broder*, French.]
To border with ornaments; to decorate with fi-
gured work; to diversify with needlework; to
adorn a ground with raised figures of needlework.
—Such an accumulation of favours is like a kind
of *embroidering*, or sitting of one favour upon an-
other. *Wotton.*—

Embroider'd so with flowers it had stood,
That it became a garden of a wood. *Waller.*
—Let no virgin be allowed to receive her lover,
but in a suit of her own *embroidering*. *Spectator*,
Nº 606.—

Embroider'd purple clothes the golden beds;
This slave the floor, and that the table spreads.
Pope.

* **EMBROIDERER.** *n. f.* [from *embroider*.]
One that adorns the clothes with needlework.—
Blue silk and purple, the work of the *embroider-*
er. *Ecclusf.*

(1.) * **EMBROIDERY.** *n. f.* [from *embroider*.]
1. Figures raised upon a ground; variegated
needlework.—

A a a Write,

Write,
In em'rald tufts, flow'rs purpled, blue and white,
Like saphire, pearl, in rich *embroidery*,
Buckled below fair knighthood's bending knee.

Shakefp.
—Laces and *embroideries* are more costly than either warm or comely. *Bacon's Advice to Villiers*.—

Next these a youthful train their vows expressed,

With feathers crown'd, with gay *embroid'ry* dress'd.

Pope.
2. Variegation; diversity of colour.—If the natural *embroidery* of the meadows were helpt and improved by art, a man might make a pretty landscape of his own possessions. *Spektator*, N° 414.

(2.) EMBROIDERY is a work in gold, silver, or silk thread, wrought by the needle upon cloth, stuffs, or muslin, into various figures. In *embroidering* stuffs, the work is performed in a kind of loom; because the more the piece is stretched, the easier it is worked. As to muslin, they spread it upon a pattern ready designed; and sometimes, before it is stretched upon the pattern, it is starched, to make it more easy to handle. *Embroidery* on the loom is less tedious than the other, in which, while they work flowers, all the threads of the muslin, both lengthwise and breadthwise, must be continually counted; but, on the other hand, this last is much richer in points, and susceptible of greater variety. Cloths too much mill'd are scarce susceptible of this ornament, and in effect we seldom see them *embroidered*. The thinnest muslins are left for this purpose; and they are *embroidered* to the greatest perfection in Saxony: in other parts of Europe, however, they *embroider* very prettily, and especially in France. There are several kinds of *embroidery*: as, 1. *Embroidery* on the stamp; where the figures are raised and rounded, having cotton or parchment put under them to support them. 2. Low *embroidery*; where the gold and silver lie low upon the sketch, and are stitched with silk of the same colour. 3. Guimped *embroidery*: this is performed either in gold or silver; they first make a sketch upon the cloth, then put on cut vellum, and afterwards sew on the gold and silver with silk thread: in this kind of *embroidery* they often put gold and silver cord, tinsel, and spangles. 4. *Embroidery* on both sides; that which appears on both sides of the stuff. 5. Plain *embroidery*; where the figures are flat and even, without cords, spangles, or other ornaments.

(3.) EMBROIDERY, FOREIGN, STATUTES RESPECTING. By stat. 22. Geo. II. c. 36. no foreign *embroidery*, or gold and silver brocade, shall be imported, upon pain of being forfeited and burnt, and penalty of 100*l.* for each piece. No person shall sell, or expose to sale, any foreign *embroidery*, gold or silver thread, lace, fringe, brocade, or make up the same into any garment, on pain of having it forfeited and burnt, and penalty of 100*l.* All such *embroidery*, &c. may be seized and burnt; and the mercer, &c. in whose custody it was found, shall forfeit 100*l.*

* To EMBROIL. *v. a.* [*broviller*, Fr.] 1. To disturb; to confuse; to distract; to throw into commotion; to involve into troubles by dissension and discord.—I had no passion, design or prepara-

tion to *embroil* my kingdom into a civil war. *Gay Charles*.—

Rumour next, and chance,
And tumult and confusion, all *embroil'd*,
And discord with a thousand various mouths.

Milton.
When she found her venom spread so far,
The royal house *embroil'd* in civil war,
Rais'd on her dusky wings she cleaves the skies.

Dryden.
2. To perplex; to entangle.—The Christian antiquities at Rome, though of a fresher date, are *embroil'd*, with fable and legend, that one receives but little satisfaction. *Addison*. 3. In the following passage the word seems improperly used for *broil* or *burn*.—The knowledge, for which we boldly attempt to rifle God's cabinet, should, like the coal from the altar, serve only to *embroil* and consume the sacrilegious invaders. *Decay of Piety*.

* To EMBROTHEL. *v. a.* [*brothel*, *brodel*] To inclose in a brothel.—

Men, which chuse
Law practice for mere gain, boldly repute,
Worse than *embrothel'd* strumpets prostitute.

Dan.
EMBRUN. See AMBRUN.

EMBRUNOIS. See AMBRUNOIS.

(1.) EMBRYO. See FOETUS, and GENERATION.

(2.) * EMBRYO. } *n. f.* [*embryo*,] 1. The
* EMBRYON. } spring yet unfinished in
womb.—The bringing forth of living creatures may be accelerated, if the *embryo* ripeneth and perfecteth sooner. *Bacon*.—An exclusion before conformation, before the birth can bear the name of the parent, or be so much as properly called an *embryon*. *Brown's Vulgar Errors*.—

The earth was form'd, but in the womb
yet
Of waters, *embryon* immature involv'd
Appear'd not.

Milton.
—In that dark womb are the signs and rudiments of an *embryo* world. *Burnet*.—

When the crude *embryo* careful nature breeds
See how she works, and how her work proceeds.

Blackstone.
While the promis'd fruit
Lies yet a little *embryo*, unperceiv'd
Within its crimson folds.

Thomson.
2. The state of any thing yet not fit for production; yet unfinished.—The company little suspected what a noble work I had then in *embryo*. *Samuel Johnson*.

EMBRYOTHLASTES, [from *embryo*, and *thlastes*, to break,] in surgery and midwifery, an instrument for breaking the bones of a dead child in the uterus, that it may be the more easily extracted.

EMBRYOTOMY. *n. f.* [from *embryo*, and *tomos*, cutting,] the art or act of dissecting a fœtus.

EMBRYULCUS, [from *embryo*, and *ulcus*, to draw,] in surgery, an instrument for extracting a dead fœtus from the uterus.

(1.) EMBS, a river of Germany, which runs in the county of Lippe, in Westphalia; runs through that of Ritburg, and then turning it passes through those of Teckenburg, and Embden till it falls into Dolart Bay, a little below Embden.

(2.) EMBS,

(1.) **EMBS**, or **HOHEN-EMBS**, a county of Germany, in Suabia, S. of that of Bregentz and the city of Constance, belonging to Austria. It is 10 miles long and 5 broad.

(3.) **EMBS**, or **EMS**, the capital of the above county, (N. a.) ten miles S. of Bregentz. There are baths near it impregnated with sulphur.

EMBURG. See **ESMBURG**.

EMDEN. See **EMDEN**.

* **EME**. *n. f.* [*came*, Saxon.] Uncle. Now obsolete.—

Whilst they were young, Cassibelan their *eme*,
Was by the people chosen in their stead;

Who on him took the royal diadem,

And goodly well it long time governed. *Spens.*

* **EMENDABLE**. *adj.* [*emendo*, Lat.] Capable of emendation; corrigible.

* **EMENDATION**. *n. f.* [*emendo*, Lat.] 1. Correction; alteration of any thing from worse to better.—The essence and the relation of any thing being, is fitted, beyond any *emendation*, for its use and use; and shews it to proceed from a sort of the highest understanding. *Grew*. 2. An emendation made in the text by verbal criticism.

* **EMENDATOR**. *n. f.* [*emendo*, Lat.] A corrector; an improver; an alterer for the better.

(1.) * **EMERALD**. *n. f.* [*emerauce*, Fr. *smaragde*, Lat.] A green precious stone.—The *emerald* evidently the same with the ancient *smaragdus*; & in its most perfect state, is perhaps the most useful of all the gems. The rough *emerald* is usually of a very bright and naturally polished surface, and is ever of a pure and beautiful green, without the admixture of any other colour. The natural *emerald* is of the hardness of the sapphire & ruby, and is second only to the diamond in lustre and brightness. *Hill on Fossils*.—Do you not see the grass how in colour they excel the *emerald*? *Sidney*.—The *emerald* is a bright grass green; it is found in fissures of rocks, along with other ores. *Woodward*.—

Nor deeper verdure dyes the robe of Spring,
When first she gives it to the southern gale,
Than the green *emerald* shows. *Thomson*.

(2.) **EMERALD**, in lithology, a genus of precious stones belonging to the order of siliceous stones. The name is derived, according to some, from the Italian *smaraldo*, or the Arabian *zomorrade*. The *emerald* is the softest of all the precious stones, but other naturalists place it the next after the diamond in hardness. It is perhaps the most beautiful of all the gems, and according to *Wallerius*, when heated in the fire, changes its colour to a deep blue, and becomes phosphorescent; but recovers its green when cold. When pulverised it has a white appearance, and, with heat, melts to a very thin and colourless glass. It becomes electric by being rubbed, and some ascribe the property of the tourmalin, viz. of being electrified by heat, and in that state attracting metals or other light substances; though after having attracted the ashes, they retain them without any signs of repulsion. See **ELECTRICITY**, *Index*. It mentions 12 different kinds of these precious stones; though it appears, from the vast size of some of them, that they must have been only three kinds of green spar, or other green stone,

which at that time went under the name of *emerald* among the ancients. The true *emerald* is found only in very small crystals, from the size of one 16th of an inch in diameter to that of a walnut. *Theophrastus*, however, mentions one 4 cubits long and 3 broad; likewise an obelisk composed of only 4 *emeralds*, the whole length being 40 cubits, and the breadth from 4 to 2. *Engelstrom* informs us, that the *emeralds*, in their rough or native state, consist of hexagonal columns mostly truncated at both ends; and that he had some in his possession, which in a gentle heat became colourless; but in a strong heat white and opaque; without any mark of fusion.

(III.) **EMERALDS**, DIFFERENT KINDS OF. *Emeralds* are distinguished by the jewellers into two different kinds, the oriental and occidental. The true oriental *emerald* is very scarce, and at present only found in the kingdom of Cambay. So great indeed is the scarcity of them, that an opinion prevailed that there are no oriental *emeralds*. This opinion was adopted by the late Mr Bruce; who informs us that he made an excursion to the island of *emeralds* in the Red Sea, and endeavoured to show that there never were any *emeralds* but what came from America, and that those said to have been found in the East Indies were imported from that continent. It is probable indeed, that in former times any kind of crystal tinged of a green colour might be called an *emerald*, and hence the green cochle spar brought from Egypt may have obtained the name of *mother of emeralds*; but of late some *emeralds* have been brought from Cambay into Italy which greatly excelled those of America. The best *emeralds* of the western continent come from Peru, and are called *oriental* by the jewellers; some are found in Europe, principally in the duchy of Silesia in Germany. *Brunick* distinguishes *emeralds* into two classes, viz. the pale and the dark green.

1. **EMERALDS**, DARK GREEN, are columnar, but very dark coloured, striped longitudinally and have little transparency. The points are generally broken off longitudinally, though *Davila* mentions one resembling a blunt triangular pyramid; and in the Imperial cabinet at Vienna, there is one with a five-sided pyramid. These are the *emeralds* which become electrical by heat; though all of them do not; and those which do so cannot be known but by actual experiment.

2. **EMERALDS**, PALE GREEN, come from the east, and from Peru, the figure being that of an hexagonal truncated prism, and the basis a vein of white quartz. The finest specimen of this kind is to be seen in the treasure of the chapel of *Loretto*, which, (unless the French have carried them to Paris, with the other Italian curiosities,) contains upwards of 100 of these precious stones great and small. A fellow to this was made by art, and both were presents to the king of Sicily, designed to represent two mount Calvaries.

(IV.) **EMERALDS**, METHOD OF COUNTERFEITING. See **PASTES**.

(V.) **EMERALDS**, MINE OF, and } See **EGYPT**,

(VI.) **EMERALDS**, MOUNTAIN OF, } § 24.

(VII.) **EMERALDS**, VALUE OF. Rough *emeralds* of the first and coarsest sort, called *plagues*, for grinding

A a a a

grinding are worth 27 shillings sterling the marc, or 8 ounces. The demi morillons, L.8 sterling per marc. Good morillons, which are only little pieces, but of fine colour, from L.1. to L.15 per marc. Emeralds larger than morillons, and called of the third colour or sort, are valued at from L.50 to L.60 the marc. Emeralds of the second sort, which are in larger and finer pieces than the preceding, are worth from L.65 to L.75 per marc. Lastly those of the first colour, otherwise called *negres caries*, are worth from L.110 to L.115. Emeralds ready cut, or polished and not cut, being of good stone, and a fine colour, are worth,

	£.	s.
Those weighing one caract,	0	10
Those of two caracts —	1	7
Those of three caracts —	2	5
Those of four caracts —	3	10
Those of five caracts —	4	10
Those of six caracts —	7	10
Those of seven caracts —	15	0
Those of eight caracts —	19	0
Those of nine caracts —	23	0
Those of ten caracts —	33	0

* To EMERGE. *v. n.* [*emergeo*, Lat.] 1. To rise out of any thing in, which it is covered.—They *emerged*, to the upper part of the spirit of wine, as much of them as lay immersed in the spirit. *Boyle*.—The mountains *emerged*, and became dry land again; when the waters retired. *Burnet*.—

Thetis, not unmindful of her son,
Emerging from the deep, to beg her boon,
Pursu'd their track.

2. To issue; to proceed.—If the prism was turned about its axis that way, which made the rays *emerge* more obliquely out of the second refracting surface of the prism, the image soon became an inch or two longer, or more. *Newton*. 3. To rise; to mount from a state of depression or obscurity; to rise into view.—

Darkness, we see, *emerges* into light;
And shining suns descend to sable night.

Dryden.

When, from dewy shade *emerging* bright,
Aurora streaks the sky with orient light;
Let each deplore his dead.

Pope.

Then, from ancient gloom *emerged*
A rising world.

Thomson.

* EMERGENCE. } *n. f.* [from *emerge*.] 1. The

* EMERGENCY. } *act* of rising out of any fluid by which it is covered.—We have read of a tyrant, who tried to prevent the *emergence* of murdered bodies. *Brown's Vulgar Errors*. 2. The act of rising or starting into view.—The *emergency* of colours, upon coalition of the particles of bodies, as were neither of them of the colour of that mixture whereof they are ingredients, is very well worth our attentive observation. *Boyle on Colours*.—The white colour of all refracted light, at its first *emergence*, where it appears as white as before its incidence, is compounded of various colours. *Newton*. 3. Any sudden occasion; unexpected casualty.—Most of our rarities have been found out by casual *emergency*, and have been the works of time and chance rather than of philosophy. *Glarville*. 4. Pressing necessity; ex-

gence. A sense not proper.—In any case of *emergency*, he would employ the whole wealth of his empire, which he had thus amassed together in his subterraneous exchequer. *Addison*.

* EMERGENT. *adj.* [from *emerge*.] 1. Rising out of that which overwhelms or obscures it.—

Love made my *emergent* fortune once more look

Above the main, which now shall hit the star.

Ben Jonson

Immediately the mountains huge appear
Emergent, and their broad bare backs unbare
Into the clouds.

Milton

2. Rising into view, or notice, or honour.—The man that is once heated, both his good and evil deeds oppress him; he is not easily *emerged*. *Ben Jonson*. 3. Proceeding or issuing from any thing.—The stoics held a fatality, and a fixed alterable course of events; but then they held so, that they fell out by a necessity *emergent* from and inherent in the things themselves, which God himself could not alter. *South*. 4. Suddenly unexpectedly casual.—All the lords declare, that upon any *emergent* occasion, they would mount their servants upon their horses. *Clarendon*.

EMERITI, in Roman antiquity, soldiers who served out their time, and had received marks of favour for their merits.

* EMERODS. } *n. f.* [corrupted by ignorance]

* EMERODS. } pronunciation from *emphr*
rroids, *aqueous*.] Painful swellings of the hemorrhoidal veins; piles.—He destroyed them, and smote them with *emerods*. 1 *Sam.*

(1.) EMERSION. *n. f.* [from *emerge*.] The time when a star, having been obscured by its near approach to the sun, appears again.—The time was in the heliacal *emersion*, when it became at greater distance from the sun. *Brown*.

(2.) EMERSON, in astronomy, is also called when the sun, moon, or other planet, begins to re-appear, after its having been eclipsed, or by the interposition of the moon, earth, or other body. The difference of longitude is sometimes found by observing the immersions and emersions of the first of Jupiter's satellites. The immersions are observed from the time of Jupiter's being in conjunction with the sun to his opposition; the emersion from the opposition to the conjunction; which two intervals are usually six months a piece, and divide the year between them. When Jupiter is in conjunction with the sun, 15 days before and afterwards, there is nothing to be observed; the planet, with his satellites being then lost in the light of the sun.

(3.) EMERSON, in physics, the rising of a solid above the surface of a fluid specifically heavier than itself, into which it had been violently immersed or thrust. It is one of the known laws of hydrostatics, that a lighter solid being forced down into a heavier fluid, immediately endeavours to emerge; and that with a force equal to the excess of weight and quantity of the fluid above that of an equal bulk of the solid. Thus, if a solid be immersed in a fluid of double its specific gravity, it will emerge again till half its body is above the surface of the fluid.

EMERSON, William, a late eminent mathematician.

ematician, born in June 1701, at Hurworth, a village about three miles south of Darlington; at least it is certain that he resided here from his childhood. His father Dudley Emerson was a tolerable proficient in mathematics; and without his books and instructions, perhaps his own genius most eminently fitted for mathematical disquisitions, would have never been unfolded. He was instructed in the learned languages by a young clergyman, then curate of Hurworth, who was nursed at his father's house. In the earlier part of his life he attempted to teach a few scholars; but whether from his concise method (for he was not happy in explaining his ideas), or the warmth of his natural temper, he made no progress in his school: he therefore soon left it off; and, satisfied with a moderate competence left him by his parents, devoted himself to a studious retirement. Towards the close of 1781, he disposed of the whole of his mathematical library to a bookseller at York, and on May 20th 1782, he died of a lingering and painful disorder at his native village, aged 81. In size he was rather short, but strong and well made, with an open countenance and ruddy complexion. He was exceedingly singular in his dress. He had but one coat, which he always wore open before, except the lower button; no waistcoat; his shirt quite the reverse of one in common use, no opening before, but buttoned back at the collar behind; a kind of flaxen wig which had not a crooked hair in it, and probably at never been combed from the time it was made, he always walked up to London when he had anything to publish, revising sheet by sheet himself: to trust no eyes but his own, was always a favourite maxim with him. He never advanced any mathematical proposition that he had not first tried in practice, constantly making all the different arts himself on a small scale, so that his house was filled with all kinds of mechanical instruments together or disjointed. He would frequently stand up to his middle in water while fishing, a diversion he was remarkably fond of. He used to study incessantly for some time, and then for relaxation like a ramble to any alehouse where he could get a body to drink with and talk to. The duke of Lancaster was highly pleased with his company, and often came to him in the fields and accompanied him home, but could never persuade him to get into a carriage. On these occasions he would sometimes say "Damn your whim-wham! I had rather walk." He was married, and his wife used to spin on an old fashioned wheel, whereof a very accurate drawing is given in his mechanics.—He was deeply skilled in music, the theory of sounds, and the various scales both ancient and modern, but was a very poor performer. He wrote, 1. The Doctrine of Fluxions: 2. The Projection of the Sphere, orthographic, stereographic, and gnomonical: 3. The Elements of Trigonometry: 4. The Principles of Mechanics: 5. A Treatise of Navigation on the Seas: 6. A Treatise of Algebra, in two books: 7. The Arithmetic of Infinities, and the differential Method, illustrated by examples: 8. Mechanics; or, the Doctrine of Motion: 9. The elements of Optics, in four books: 10. A System of Astronomy: 11. The Laws of Centripetal and Centrifugal Force: 12.

The Mathematical Principles of Geography: 13. Tracts, 8vo: 14. Cyclomathesis; or an easy Introduction to the several branches of Mathematics: 15. A short Comment on Sir Isaac Newton's Principia; to which is added, A Defence of Sir Isaac against the Objections that have been made to several Parts of his Works: And, 16. A Miscellaneous Treatise, containing several Mathematical Subjects, 8vo. 1776.

EMERSTORFF, a town of Germany, in the archduchy of Austria, on the Danube, 16 miles above Crems.

(1.) * **EMERY**. *n. f.* [*smyris*, Lat. *esmeril*, Fr.] —*Emery* is an iron ore, considerably rich. It is found in the island of Guernsey, in Tuscany, and many parts of Germany.—It has a near relation to the magnet. The lapidaries cut the ordinary gems on their wheels by sprinkling the wetted powder over them; but it will not cut diamonds. It is useful in cleaning and polishing steel. *Hill*.

(2.) **EMERY** is found in large masses of no determinate shape or size, extremely hard, and very heavy. It is usually of a dusky brownish red on the surface; but when broken, is of a fine bright iron grey, with some tinge of redness; and is spangled all over with shining specks, which are small flakes of a foliaceous talk, highly impregnated with iron: It is also sometimes very red, and then usually contains veins of gold. It makes no effervescence with any of the acid menstrua. Dr Lewis is of opinion, that some kinds of emery may contain platina. See **PLATINA**.

EMESA, or } an ancient town of Asia, in Syria,
EMESSA, } under the government of the bashaw of Damascus; 25 miles S. of Hama. It has several fine ruins, which give some idea of its ancient magnificence.

* **EMETICALLY**. *adv.* [from *emetical*.] In such a manner as to provoke to vomit.—It has been complained of, that preparations of silver have produced violent vomits; whereas we have not observed duly refined silver to work *emetically*, even in women and girls. *Boyle*.

* **EMETICAL**. } *adj.* [*emetic*.] Having the quality
* **EMETICK**. } of provoking vomits.—Various are the temperaments and operations of herbs; some purgative, some *emetick*, and some sudorifick. *Hale*.

EMETZ, a town of Russian Siberia, in the government of Tobolsk, 28 miles W. of Ilichim.

* **EMICATION**. *n. f.* [*emication*, Lat.] Sparkling; flying off in small particles, as sprightly liquours.—Iron, in aqua fortis, will fall into ebullition with noise and *emication*, as also a crafts and humid exhalation. *Brown*.

* **EMITION**. *n. f.* [from *emissum*, Latin.] Urine; what is voided by the urinary passages.—Gravel and stone grind away the flesh, and effuse the blood apparent in a sanguine *emission*. *Harvey on Consumptions*.

* To **EMIGRATE**. *v. a.* [*emigro*, Lat.] To remove from one place to another.

* **EMIGRATION**. *n. f.* [from *emigrate*.] Change of habitation; removal from one place to another.—We find the originals of many kingdoms either by victories, or by *emigrations*, or intestine commotions. *Hale*.

EMILDON, a village in Northumberland.

EMIL

EMILLEGUE, one of the Pelew islands.

EMIMS, ancient inhabitants of the land of Canaan beyond Jordan, towards the Dead Sea; who were defeated by Chedorlaomer and his allies. Moses tells us, (Gen. xiv. 5.) that they were beaten in Shaveh Kirjathaim; which was in the country of Sihon conquered from the Moabites. Joth. xiii. 19—21. The Emims were a warlike people, of a gigantic stature, and very numerous. The Moabites cut off most of them, and incorporated with the rest, when they seized their country, Deut. ii. 10, 11.

(1.) * **EMINENCE**. **EMINENCY**. *n. f.* [*eminencia*, Latin.] 1. Loftiness; height. 2. Summit; highest part.—Mountains abound with different vegetables, every vertex or *eminency* affording new kinds. *Ray on the Creation*. 3. A part rising above the rest.—They must be smooth, almost imperceptible to the touch, and without either *eminence* or cavities. *Dryden's Dufres*. 4. A place where one is exposed to general notice.—A satyr or libel on one of the common stamp, never meets with that reception as what is aimed at a person whose merit places him upon an *eminence*, and gives him a more conspicuous figure. *Addison's Spectator*. 5. Exaltation; conspicuousness; state of being exposed to view; reputation; celebrity; fame; pre-ferment; greatness.—

You've too a woman's heart, which ever yet
Affected *eminence*, wealth, sovereignty.

Shakespeare. Henry VIII.

—Alterations are attributed to the powerfulest under princes, where the *eminency* of one obscu-
reth the rest. *Wotton* —

He deserv'd no such return

From me, whom he created what I was,

In that bright *eminence*; and with his good

Upbraided none. *Milton's Paradise Lost*.

—Where men cannot arrive to any *eminency* of estate, yet religion makes a compensation, by teaching content. *Tillotson*.—These two were men of *eminency*, of learning as well as piety. *Stillingfleet*.

6. Supreme degree.—

Whatever pure thou in the body enjoy'st,

And pure thou wert created, we enjoy

In *eminence*. *Milton's Par. Lost*.

7. Notice; distinction.—

Let your remembrance still apply to Banquo;
Present him *eminence* both with eye and tongue.

Shakespeare.

8. A title given to cardinals.

(2.) **EMINENCE**, in geography, a little hillock or ascent above the level of the adjoining cham-
paign.

(3.) **EMINENCE**, an honorary title, § 1, *def.* 8. The decree of pope Urban VIII, appointing that the cardinals should be addressed by this title is dated 10th Jan. 1630. They then laid aside the titles of *illustrissimi*, and *reverendissimi*, which they had born before. The ci-devant grand master of Malta was likewise addressed under the quality of *eminence*; and no doubt the emperor Paul will claim the same title, now that he has assumed that dignity. Popes John VIII, and Gregory VII, gave this title to the kings of France. The emperors had likewise born it.

* **EMINENT**. *adj.* [*eminens*, Latin.] 1. High;

lofty.—Thou hast built unto thee an *eminent* place.
Ezekiel.—

Satan, in gesture proudly *eminent*,

Stood like a tow'r.

Milton.

2. Dignified; exalted.—

Rome for your sake shall push her conquests on,

And bring new titles home from nations won,

To dignify so *eminent* a son. *Dryden's Jer.*

3. Conspicuous; remarkable.—She is *eminent* for
a sincere piety in the practice of religion. *Addison's*
Freeholder.—

Eminent he mov'd

In Grecian arms, the wonder of his foes. *Glover.*

EMINENTISSIMUS, [Lat. *i. e.* most *eminent*]
a title of late given to the cardinals.

* **EMINENTLY**. *adv.* [from *eminent*.] 1. Con-
spicuously; in a manner that attracts observation.

Thy love, which else

So *eminently* never had been known. *Milton*

Lady, that in the prime of earliest youth,

Wisely has shun'd the broad way and the great

And with those few art *eminently* seen,

That labour up the hill of heavenly truth.

Milton

Such as thou hast solemnly elected,

With gifts and graces *eminently* adorn'd,

To some great work. *Milton's Samson Agonistes*

2. In a high degree.—All men are equal in the
judgment of what is *eminently* best. *Dryd*.—The
simplicity, without which no human performance
can arrive to perfection, is no where more
eminently useful than in this. *Swift*.

EMINGTON, a town SE. of Tame, Oxford.

EMIR, a title of dignity among the Turks, be-
signifying a prince. This title was first given to the
caliphs; but when they assumed the title of Sa-
tans, that of emir remained to their children; and
that of Cæsar among the Romans. At length the
title came to be attributed to all who were de-
scended from Mahomet by his daughter Fatima,
and who wear the green turban instead of the
white. The Turks observe that the emirs, before
their 40th year, are men of the greatest gravity,
learning, and wisdom; but after this, if they are
not great fools, they discover some signs of levity
and stupidity. This is interpreted by the Turks
as a sort of divine impulse in token of their birth
and sanctity. The Turks also call the vizirs, be-
shaws, or governors of provinces, by this title.

EMIR-BACHA, a town of Asiatic Turkey, in the
province of Natolia, 8 mils W. of Tocat.

(1.) * **EMISSARY**. *n. f.* [*emissarius*, Lat.] 1. One
sent out on private messages; a spy; a secret in-
gent.—Clifford, an *emissary* and spy of the king, was
sufficed over into Flanders with his privacy. *Bacon's*
Henry VII.—

You shall neither eat nor sleep,

No, nor forth your window peep,

With your *emissary* eye,

To fetch in the forms go by. *Ben Jonson's Under-rev.*

—The Jesuits send over *emissaries*, with instru-
ctions to personate themselves members of the se-
veral sects amongst us. *Swift*. 2. One that em-
or sends out. A technical sense.—Wherever there
are *emissaries*, there are absorbent vessels in the
skin; and, by the absorbent vessels, mercury will
pass into the blood. *Arbutnot on Aliments*.

(2.) **EMIS-**

(1.) **EMISSARY VESSELS**, in anatomy, the same with those more commonly called **EXCRETORY**.

(1.) * **EMISSION**. *n. f.* [*emissio*, Lat.] The act of sending out; vent.—Tickling causeth laughter: the cause may be the *emission* of the spirits, and so of the breath by a flight from titillation. *Bacon*.—Populosity naturally requireth transmigration and *emission* of colonies. *Brown's Vulgar Err.*—Cover them with glasses; but upon all warm and benign *emissions* of the sun, and sweet showers, give them air. *Boerhaave*.—Affection, in the state of innocence, was happily pitched upon its right object; it lamed up in direct fervours of devotion to God, and in collateral *emissions* of charity to its neighbour. *South*.

(2.) **EMISSION**, in physiology, a term used chiefly to denote the ejaculation of the semen. See **ATOMY**, § 310.

* **To EMIT**. *v. a.* [*emitto*, Latin.] 1. To send whither to go; to give vent to.—These baths continually *emit* a manifest and very sensible heat; ay, some of them, at some times, send forth an equal and visible flame. *Woodward*. *Natural History*.—The soil, being fruitful and rich, *emits* steams, issuing of volatile and active parts. *Arbutnot*.

2. To let fly; to dart.—
Pay sacred reverence to Apollo's song,
Left, wrathful, the far-shooting god *emit*
His fatal arrows. *Prior*.

To issue out juridically.—That a citation be *emit*, it ought to be decreed and *emitted* by the proper authority, and at the instance of the party.

EMLEY, a village in Suffex, near Selsey.
EMLY, an ancient city of Ireland, in Tipperary, now in ruins. In the 5th century it was a bishop's see, and afterwards an archbishopric, but in 1568, was united to Cathel. It is 15 miles W. of Cathel.
EMMA, a river of the Helvetic republic, in the canton of Bern. See **BURGDORF**.

EMMANUEL, [ἐμμανυ, Heb. i. e. God with us.] one of the names of our Saviour. See **IMMANUEL**.
(1-3.) **EMMAUS**, **EMAUS**, or **AMMAUS**, in ancient geography, a village, 60 stadia NW. of Jerusalem, or about 7 miles: it afterwards became a town, and a Roman colony, called **NICOPOLIS**. *Strabo* mentions a village called *Emmaus* towards *Idida*, 22 miles from Jerusalem; and another, at Tiberias.

(4.) **EMMAUS**, in modern geography, a Moravian settlement in Pennsylvania, 8 miles from Bethlehem.

EMMELOORT, a town of the Batavian republic, in the N. part of the island of Shockland, the *Zuyder Zee*, included in the department of the *Yssel*: 10 miles E. of Vollenhove.

(1.) * **EMMENAGOGUES**. *n. f.* [*emmenagogue*, and *gogos*.] Medicines that promote the courses, either by giving a greater force to the blood in its circulation, or by making it thinner. *Quincy*.—*Emmenagogues* are such as produce a plethora, or fullness of the vessels, consequently such as strengthen the organs of digestion, so as to make good blood. *Arbutnot* on Diet.

(2.) **EMMENAGOGUES** are so named from *em*, in, and *menag*, I lead, because they promote the monthly discharge.

EMMENDINGEN, a town of Germany, in

the circle of Suabia, and margraviate of Baden, on the Enz, 7 miles N. of Friburg, and 19 SSE. of Strasburg.

EMMERGREEN, a village in Dorsetshire.

EMMERICH, } or **EMBRICK**, a rich fortified
EMMERICK, } town of Germany, in the circle
of Westphalia, and ci-devant duchy of Cleves, now annexed to the French republic, and included in the department of the Rher. It carries on a good trade with the Dutch. The streets are neat and regular, and the houses tolerably built. It was taken by the French in 1672, and delivered to the elector of Brandenburg, in 1673. It is seated on the left bank of the Rhine. Lon. 6. g. E. Lat. 5. 45. N.

EMMERTON, a village in Buckinghamshire.

(1.) * **EMMET**. *n. f.* [*emette*, Sax.] An ant; a pismire.—

When cedars to the ground fall down by the weight of an *emmet*,

Or when a rich ruby's just price be the worth of a walnut. *Sidney*.

(2.) **EMMET**. See **FORMICA**, and **TERMES**.

(3.) **EMMET**, in geography, a town in Lancash.

* **To EMMEW**. *v. a.* [from *mew*.] To mew or coop up.—

This outward fainted deputy,
Whose settl'd visage and delib'rate word,
Nips youth i' th' head, and follies doth *emmeu*,
As fawcon doth the fowl, is yet a devil. *Shakesp.*

EMMITSBURGH, or **EMMITSBURGH**, a flourishing village of the United States, in Frederick county, Maryland, situated between Flat-run and Tom's creek, W. head waters of the Monocacy, and about a mile S. of the Pennsylvania line. It is 24 miles NE. by E. of Frederick, and 30 NW. of Baltimore.

EMMIUS, Ubbo, a very learned professor, born at Gretha in East Friesland, in 1547, and chosen rector of the college of Norden in 1579. This seminary flourished exceedingly under his care; and declined as visibly after he was ejected, in 1587, for refusing to subscribe the Confession of Augsburg. In 1588, he was made rector of the college of Leer; and when the city of Groningen confederated with the United Provinces, the magistrates appointed him rector of that college: which employment he filled with the highest repute near 20 years. The college being erected into an university, he was the first rector, and one of the chief ornaments of it by his lectures, till his infirmities prevented his public appearance. His wisdom was equal to his learning; so that the governor of Friesland and Groningen often consulted him, and seldom failed to follow his advice. He wrote *Vetus Græcia illustrata*, 3 vols; *Decades Rerum Frisicarum*; and many other valuable works. He died in 1625.

EMMOTLAND, a village in Yorkshire.

* **To EMMOVE**. *v. a.* [*emmouvoir*, Fr.] To excite; to rouse; to put into emotion. Not used.

One day, when him high courage did *emmeu*,
He pricked forth. *Fairy Queen*.

EMNETH, a village in Norfolk.

EMO, a town of Ireland, in Queen's County, Leinster, between Monastereven and Mountmellick, 34 miles from Dublin.

(1.) * **EMOLLIENT**. *adj.* [*emolliens*, Lat.] Softening;

tening; suppling.—Barley is *emollient*, moistening, and expectorating. *Arbut.*—Diureticks are decoctions, emulsions, and oils of *emollient* vegetables, so far as they relax the urinary passages: such as relax ought to be tried before such as stimulate. *Arbutnot.*

(2.) * *EMOLLIENTS. n. f.* [Such things as sheath and soften the asperities of the humours, and relax and supple the solids at the same time. *Quincy.*—*Emollients* ought to be taken in open air, to hinder them from perspiring, and on empty stomachs. *Arbutnot.*

* *EMOLLITION. n. f.* [*emollitio*, Lat.] The act of softening.—Lassitude is remedied by bathing, or anointing with oil and warm water; the cause is, for that all lassitude is a kind of contusion and compression of the parts, and bathing and anointing give a relaxation or *emollition*. *Bacon.*—Powerful menstrums are made for its *emollition*, whereby it may receive the tincture of minerals. *Brown.*

(1.) * *EMOLUMENT. n. f.* [*emolumentum*, Lat.] Profit; advantage.—Let them consult how politic they were, for a temporal *emolument* to throw away eternally. *South.*—Nothing gives greater satisfaction than the sense of having dispatched a great deal of business to publick *emolument*. *Tatler.*

(2.) *EMOLUMENT* is properly applied to the profits arising daily from an office or employ. The Latin, *emolumentum*, according to some, primarily signifies the profit redounding to the miller from his mill; from *mola*, *molere*, to grind.

* *EMONGST. prep.* [so written by *Spenser.*]
Among—

The merry birds of every sort,
Chaunted aloud their cheerful harmony;
And made *amongst* themselves a sweet consort,
That quick'ned the dull spirit with musical comfort. *Fairy Queen.*

(1.) * *EMOTION. n. f.* [*emotion*, Fr.] Disturbance of mind; vehemence of passion, or pleasing or painful.—I will appeal to any man, who has read this poet, whether he finds not the natural *emotion* of the same passion in himself, which the poet describes in his feigned persons? *Dryden.*—

Those rocks and oaks that such *emotion* felt,
Were rural maids whom Orpheus taught to melt. *Granville.*

(2.) *EMOTION* is thus distinguished from *PASSION*, by the late celebrated Lord Kaimes, in his *Elements of Criticism*; vol. 1. p. 41. "An internal motion or agitation of the mind, when it passeth away without desire, is denominated an *emotion*: when desire follows, the motion or agitation is denominated a *passion*. A fine face, for example, raiseth in me a pleasant feeling: if that feeling vanish without producing any effect, it is in proper language an *emotion*; but if the feeling, by reiterated view of the object, becomes sufficiently strong to occasion desire, it loses its name of *emotion*, and acquires that of *passion*. The same holds in all other passions. The painful feeling raised in a spectator by a slight injury done to a stranger, being accompanied with no desire of revenge, is termed an *emotion*; but that injury raiseth in the stranger a stronger emotion, which being accompanied with desire of revenge, is a *passion*. External expressions of distress produce in the spectator a painful feeling, which being sometimes so

slight as to pass away without any effect, is an *emotion*; but if the feeling be so strong as to prompt desire of affording relief, it is a *passion*, and is termed *pity*. Envy is emulation in excess: if the exaltation of a competitor be barely disagreeable, the painful feeling is an *emotion*; if it produce desire to depress him, it is a *passion*." See *PASSION*.

EMOUI, } or HIA-MEN, an island and port of
EMOUY, } China, under the jurisdiction of the
province of FO-KIEN. See HIA-MEN.

* To EMPALIE. v. a. [*empaler*, Fr.] 1. To fence with a pale.—

How happy's he, which hath due place assign'd
To his beasts, and disforested his mind?

Empal'd himself to keep them out, not in;
Can won, and dares trust corn, where they
been.

2. To fortify.—All that dwell near enemies
villages, to save themselves from surprize. *Ralph's
Essays.*—The English *empal'd* themselves with
pikes, and therewith bare off their enemies. *Hay*

3. To inclose; to shut in.—

Round about her work she did *empale*,
With a fair border wrought of sundry flowers. *Spenser.*

Keep yourselves in breath,
And when I have the bloody Hector found,
Empale him with your weapons round about. *Shakspeare.*

They have *empal'd* within a zodiack
The free-born sun, and keep twelve signs about
To watch his steps; the Goat and Crab controul
And fright him back. *Dun.*

Thank my charms,
I now *empale* her in my arms. *Cleaveland.*
Impenetrable, *empal'd* with circling fire,
Yet unconsum'd. *Milton's Paradise Lost.*

4. To put to death by spitting on a stake upright.—

Who can bear this, resolve to be *empal'd*;
His skin fled off, and roasted yet alive? *Southey.*

Let them each be broken on the rack
Then, with what life remains, *empal'd* and
To writhe at leisure round the bloody stake. *Addison's Cato.*

—Nay, I don't believe they will be content
with hanging; they talk of *empaling*, or breaking
on the wheel. *Arbutnot.*

(1.) *EMPALEMENT*, [from *in* and *pale*, i. e. a stake,] an ancient barbarous punishment, which consisted in thrusting a stake up the fundament. It is mentioned by Juvenal. It was often inflicted under Nero, and continues to be so in Turkey.

(2.) *EMPALEMENT OF A FLOWER*, the same with *CALYX*.

* *EMPANNEL. n. f.* [from *panne*, Fr.] To writing or entering the names of a jury into parchment schedule, or roll of paper, by the sheriff, which he has summoned to appear for the performance of such publick service as justice employed in. *Coovel.*—Who can expect upright verdicts from such packed, corrupt juries? We may not be allowed to make exceptions against this so incompetent *empannel*? *Der. of Pleas.*

* To EMPANNEL. v. a. [from the noun.] To summon to serve on a jury. A law term.—It is not need to *empannel* a jury of moralists or divines. *every*

every man's own breast sufficiently instructing him.
Government of the Tongue.

EMPANNELLING. See **IMPANNELING.**

* **EMPARLANCE.** *n. f.* [from *parler*, Fr.] It signifies, in common law, a desire or petition in court of a day to pause what is best to do; and it is sometimes used for the conference of a jury in the cause committed to them. *Coovel.*

* **EMPASML.** *n. f.* [*empasser*.] A powder to correct the bad scent of the body.

* **To EMPASSION.** *v. a.* [from *passion*.] To move with passion; to affect strongly; to throw off from equanimity.—

Unto my eyes strange shows presented were,
Picturing that which I in mind embrac'd,
That yet those fights *empassion* me full near.

Spenser.

So, standing, moving, or to height upgrown,
The tempter, all *empassion'd*, thus began. *Milt.*
EMPEDOCLES, a celebrated philosopher and poet, born at Agrigentum, in Sicily. He followed the Pythagorean philosophy, and admitted the metempsychosis. He constantly appeared with a crown of gold on his head; to maintain, by this outward pomp, the reputation he had acquired for being a very extraordinary man. Yet Aristotle says, that he was a great lover of liberty, extremely averse to state and command, and that he refused a kingdom that was offered him. His principal work was a Treatise in verse on the Nature and Principles of Things. Aristotle, Lucretius, and all the ancients, make the most magnificent eulogiums on his poetry and eloquence. He taught rhetoric; and often alleviated the anxieties of his mind, as well as the pains of his body, with music. It is reported, that his curiosity to visit the flames of the crater of *Ætna* proved fatal to him. Some maintain that he wished it to be believed that he was a god; and that his death might be unknown, he threw himself into the crater and perished in the flames. His expectations, however, were frustrated; and the volcano by rowling up one of his sandals discovered to the world that Empedocles had perished by fire. Others report that he lived to an extreme old age; and that he was drowned in the sea about A.C. 440.

* **To EMPEOPLE.** *v. a.* [from *people*.] To form to a people or community.—

He wonder'd much, and 'gan enquire
What itately building durst so high extend
Her lofty towers unto the starry sphere,
And what unknown nation there *empeopled* were?

Spenser.

* **EMPERESS.** *n. f.* [from *emperour*, now written *empress*.] 1. A woman invested with imperial power.—

Long, long, may you on earth our *emperess* reign,
Ere you in heaven aglorious angel stand. *Davies.*
The queen of an emperour.—

Lavinia will I make my *emperess*,
Rome's royal mistress, mistress of my heart.

Shakespeare.

(1.) **EMPEROR**, among the ancient Romans, signified a general of an army, who, for some extraordinary success, had been complimented with his appellation. Thus Augustus, having obtained

no less than 26 victories, was as often saluted with the title *emperor*; and Titus was denominated *emperor* by his army after the reduction of Jerusalem. Afterwards, it came to denominate an absolute monarch or supreme commander of an empire. In this sense Julius Cæsar was called *emperor*: the same title descended with the dignity to Octavius, Tiberius, and Caligula; and afterwards it became elective. The title *emperor* does not, and cannot add any thing to the rights of sovereignty: its effect is only to give precedence and pre-eminence above other sovereigns; and as such, it raises those invested with it to the summit of all human greatness. It is disputed, if emperors have the power of disposing of the regal title. It is true, they have sometimes taken upon them to erect kingdoms: Thus Bohemia and Poland are said to have been raised to that dignity: thus also, the emperor Charles II. in 877, gave Provence to Boson, putting the diadem on his head, and decreeing him to be called king, *ut more prisorum imperatorum regibus videretur dominari*. And the emperor Leopold erected ducal Prussia into a kingdom in favour of the elector of Brandenburg; though several of the kings of Europe refused for some time to acknowledge him in that capacity, yet, by the treaty of Utrecht in 1712, they all came in. In the East, the title and quality of emperor are more frequent than among us; thus, the sovereign princes of China, Japan, Mogul, Persia, &c. are all emperors. In 1723, the czar of Muscovy assumed the title of *emperor of all the Russias*, and procured himself to be recognized as such by most of the princes and states of Europe. In the West, the title has been long restrained to the emperors of Germany. The first who bore it was Charlemagne, who had it conferred upon him by pope Leo III. having indeed had all the power before. The imperial prerogatives were formerly much more extensive than at present. See **GERMANY**. The kings of France were anciently also called emperors, at the time when they reigned with their sons, whom they associated to the crown. Thus Hugh Capet, having associated his son Robert, took the title of emperor, Robert that of king; under which titles they are mentioned in the History of the Council of Rheims, by Gerbert, &c. King Robert is also called emperor of the French by Helgau of Fleury. Lewis the Gros, upon associating his son, did the same. In the first Register of the King's Charters, fol. 166, are found letters of Lewis the Gros, dated in 1116, in favour of Raymond bishop of Maguelonne, wherein he styles himself, *Ludovicus, Dei ordinante providentia, Franco-imperator Augustus*. The kings of England had likewise anciently the title of emperors, as appears from a charter of king Edgar: *Ego Edgarus Anglorum basileus, omniumque regum insularum oceani que Britanniam circumjacent, &c. imperator & dominus*.

(2.) * **EMPEROUR.** *n. f.* [*empereur*, French; *imperator*, Latin.] A monarch of title and dignity superiour to a king: as, the *emperour* of Germany.—

Charles the *emperour*,
Under pretence to see the queen his aunt,
Makes visitation.

Shakespeare. Henry VIII.

B b b

* EM-

* **EMPERY.** *n. f.* [*empire*, French; *imperium*, Latin.] Empire; sovereignty; dominion. A word out of use.—

A lady

So fair, and fastened to an *emperry*,
Would make the great'st king double. *Shakef.*

Take on you the charge

And kingly government of this your land;
Not as protector, steward, substitute;
But as successively from blood to blood,
Your right of birth, your *emperry*, your own.

Shakespeare.

EMPETRUM, BERRY-BEARING HEATH: A genus of the triandria order, belonging to the dioecia class of plants. In the natural method this genus is ranked by Linnæus under the 54th order, *Miscellaneæ*; and likewise among those of which the order is doubtful. The male calyx is tripartite; the corolla tripetalous; the stamina long. The female calyx is tripartite; the corolla tripetalous; the styles nine; berry nine-seeded. There are two species; of which the

EMPETRUM NIGRUM, which bears the crow-crake berries, is a native of Britain. It grows wild on boggy heaths and mountains. Children sometimes eat the berries; but, when taken in too great quantity, they are apt to occasion a headach. Grouse feed upon them. When boiled with alum, they afford a dark purple dye. Goats are not fond of it. Cows, sheep, and horses refuse it.

(1.) * **EMPHASIS.** *n. f.* [*emphasis*, Gr.] A remarkable stress laid upon a word or sentence; particular force impressed by file or pronunciation.—

Oh, that brave Cæsar!

—Be choak'd with such another *emphasis*.

Shakespeare.

—*Emphasis* not so much regards the time as a certain grandeur, whereby some letter, syllable, word or sentence is rendered more remarkable than the rest, by a more vigorous pronunciation, and a longer stay upon it. *Holder*.—These questions have force and *emphasis*, if they be understood of the antediluvian earth. *Burnet's Theory*.

(2.) **EMPHASIS.** See DECLAMATION, ORATORY, and READING.

* **EMPHATICALLY.** *adv.* [from *emphatical*.] 1. Strongly; forcibly; in a striking manner.—How *emphatically* and divinely does every word proclaim the truth that I have been speaking of! 2. According to appearance.—What is delivered of the incurvity of dolphins, must be taken *emphatically*, not really, but in appearance, when they leap above water, and suddenly shoot down again. *Brown*.

* **EMPHATICAL.** } *adj.* [*emphaticus*.] 1. Forcible; strong; striking.—Where he endeavours to dissuade from carnivorous appetites, how *emphatical* is his reasoning! *Garth*.—In proper and *emphatick* terms thou didst paint the blazing comet's fiery tail. *Arbutnot's John Bull*. 2. Striking the sight.—It is commonly granted, that *emphatical* colours are light itself, modified by refractions. *Boyle on Colours*.

EMPHIRAXIS, [*emphrax*], an obstruction in any part of the body.

(1.) * **EMPHYSEMA.** *n. f.* [*emphysema*]—*Emphysema* is a light puffy humour, easily yielding to

to the pressure of the finger, arising again in the instant you take it off. *Wifeman*.

(2.) **EMPHYSEMA** is a windy tumor, generally occasioned by a fracture of the ribs, and formed by the air insinuating itself, by a small wound, between the skin and muscles, into the substance of the cellular or adipose membrane, spreading itself afterwards up to the neck, head, belly, and other parts, much after the manner in which butchers blow up their veal.

* **EMPHYSEMATOUS.** *adj.* [from *emphysema*.] Bloat'd; puffed up; swollen.—The signs of a gangrene are these: the inflammation loses its redness, and becomes dusky and livid; the tenderness of the skin goes off, and feels to the touch flabby or *emphysematous*; and vesications, filled with ichor of different colours, spread all over it. *Sharp's Surgery*.

EMPHYTEUSIS, [from *em*, in, and *phusis*, to plant, Gr.] the act of planting, or clearing lands for planting; the tenure of lands on that condition. *Bailey*.

* **TO EMPIERCE.** *v. a.* [from *pierce*.] To pierce into; to enter into by violent appulse.—

The weapon bright,

Taking advantage of his open jaw,

Ran through his mouth with so importune might,

That deep *empierce'd* his darksome hollow maw.

Spenser.

* **EMPIGHT.** *preterite and part.* from *to pight*, or *pitch*. [See *PITCH*.] Set; fixed; fastened.—

But he was wary, and ere it *empight*

In the meant mark, advanc'd his shield a'tween.

Spenser.

EMPINGHAM, a village in Rutlandshire.

(1.) * **EMPIRE.** *n. f.* [*empire*, French; *imperium*, Latin.] 1. Imperial power; supreme dominion; sovereign command.—

Assert, ye fair ones, who in judgment sit,

Your ancient *empire* over love and wit. *Rome*.

2. The region over which the dominion is extended.—A nation extended over vast tracts of land, and numbers of people, arrives in time at the ancient name of kingdom, or modern of *empire*. *Temple*.—

Sextus Pompeius

Hath given the dare to Cæsar, and commands

The *empire* of the sea. *Shakef. Ant. and Cleop.*

3. Command over any thing.

(2.) **EMPIRE**, (§ 1. *def.* 2.) in political geography, a large extent of land, under the jurisdiction or government of an emperor. See **EMPEROR**, § 1. In ancient history we read of four great empires, viz. 1. That of the Assyrians, Chaldeans, and Babylonians; 2. of the Medes and Persians; 3. of the Greeks; and 4. of the Romans. The first subsisted from the time of Nimrod, who founded it A. M. 1800, according to the computation of Usher, to Sardanapalus their last king, in 3257, and consequently lasted above 1450 years. The empire of the Medes commenced under Arbaces, A. M. 3257; was united to that of the Babylonians and Persians under Cyrus, A. M. 3468, and ended with the death of Darius Codomannus in 3674. The Grecian empire lasted only during the reign

reign of Alexander the Great, beginning in A. M. 3674, and terminating with the death of this conqueror in 3681, when his conquests were divided among his captains. The Roman empire commenced with Julius Cæsar, when he was made perpetual dictator, in A. U. C. 708, A. M. 3956, and A. D. 48. The seat of the empire was removed to Byzantium by Constantine, A. D. 334, and the east and west were still considered as united under the title of the Roman empire though mostly governed by two different series of emperors, till the total overthrow of the latter under Augustulus, by the Goths, A. D. 476. The Western empire was not revived even in name, till the year 800, when Charles the Great, of France, was proclaimed emperor by the Romans. From this epoch the east and west formed two separate empires; that of the east, governed by Greek emperors, commenced A. D. 801: and being gradually weakened, terminated under Constantine Palæologus in 1453. The western empire was afterwards known by the appellation of the empire, or German empire. Antiquaries distinguish between the medals of the *upper*, and *lower* or *bas*, empire. The curious only value those of the upper empire, which commences with Cæsar or Augustus, and ends A. D. 260. The lower empire comprehends near 1200 years, reckoning down to the destruction of Constantinople in 1453. They usually distinguish two ages, or periods of the lower empire: the first beginning where the upper ends, viz. with Aurelian, and ending with Anastasius, including 200 years; the second beginning with Anastasius, and ending with the Palæology, which includes 1000 years.

(3.) *The* EMPIRE, used absolutely and without any addition, signifies the empire of Germany; called also, in juridical acts and laws, *The Holy Roman Empire*. It began with the 9th century; Charlemagne being created first emperor by pope Leo III. who put the crown on his head in St Peter's church on Christmas day, A. D. 800. Authors are at a loss under what form of government to range the empire. Some maintain it to be a monarchical state, because all the members are obliged to seek the investiture of their states of the emperor, and to take an oath of fidelity to him. Others consider it as a republic, or aristocratic state because the emperor cannot resolve or determine any thing without the concurring suffrages of the princes. If they require investiture from, and swear fealty to him, it is only as head of the republic, and in the name of the republic, and not in his own; just as at Venice, before the overthrow of that state by the French, every thing was transacted in name of the doge. Others will have the empire to be a monarcho aristocratic state, i. e. a mixture of monarchy and aristocracy; because, though the emperor in many cases seems to act sovereignly, yet his decrees and resolves have no force, if the states refuse to confirm them. Lastly, it has been called an aristo-democratic state, because the diet, wherein the sovereignty is lodged, is composed of princes and the deputies of the cities; and is divided into three orders or bodies, called colleges, viz. the college of electors, the college of princes, and the college

of cities. See COLLEGE, § IV, 2—4. DIET, § III, ii. ELECTOR, § 2; GERMANY, PRINCE, STATES, &c.

(4.) EMPIRE, EASTERN. See CONSTANTINOPLE.

(5.) EMPIRE, WESTERN. See GERMANY, and ROME.

* EMPIRICAL. EMPIRICK. *adj.* [from the noun.] 1. Verfed in experiments.—

By fire

Of sooty coal, the *empirick* alchymist
Can turn, or holds it possible to turn,
Metals of drossiest ore to perfect gold. *Milton*.
2. Known only by experience; practised only by rote, without rational grounds.—The most sovereign prescription in Galen is but *empirick* to this preservative. *Shakespeare*.—

In extremes, bold counsels are the best;

Like *empirick* remedies, the last are try'd,

And by th' event condemn'd or justify'd.

Dryden.

* EMPIRICALLY. *adv.* [from *empirical*.] 1. Experimentally; according to experience.—We shall *empirically* and sensibly deduct the causes of blackness from originals, by which we generally observe things denigrated. *Brown's Vulgar Errors*. 2. Without rational ground; charlatanically; in the manner of quacks.

* EMPIRICISM. *n. s.* [from *empirick*.] Dependence on experience without knowledge of art; quackery.

(1.) * EMPIRICK. *adj.* See EMPIRICAL.

(2.) * EMPIRICK. *n. s.* [*εμπιρικ*.] This word seems to have been pronounced *empirick* by *Milton* and *empirick* by *Dryden*. *Milton's* pronunciation is to be preferred.] A trier; an experimenter; such persons as have no true education in, or knowledge of physical practice, but venture upon hearsay and observation only. *Quincy*.—The name of Hippocrates was more effectual to persuade such men as Galen, than to move a silly *empirick*. *Hooker*.—That every plant might receive a name, according unto the diseases it cureth, was the wish of Paracelsus; a way more likely to multiply *empiricks* than herbalists. *Brown*.—Such an aversion and contempt for all manner of innovators, as physicians are apt to have for *empiricks*, or lawyers for pettifoggers. *Swift*.—

Th' illiterate writer, *emp'rick*-like applies

To each disease unsafe chance remedies;

The learn'd in school, whence science first began,

Studies with care th' anatomy of man. *Dryden*.
EMPIS, in zoology, a genus of insects belonging to the order Diptera; of which the characters are these: The proboscis is of an horny substance, bivalve, reflexed under the head and breast, and longer than the thorax. See PLATE CXXXV, fig. 4.

* EMPLASTER. *n. s.* [*εμπλαστρον*.] This word is now always pronounced, and generally written *plaster*.] An application to a fore of an oleaginous or viscous substance, spread upon cloth. See PLASTER.—All *emplasters*, applied to the breasts, ought to have a hole for the nipples. *Wise man's Surgery*.

* To EMPLASTER. *v. a.* [from the noun.] To cover with a plaster.—They must be cut out to

B b b 2

the

the quick, and the sores *emplastered* with tar. *Mortimer's Husbandry.*

(1.) * **EMPLASTICK**. *adj.* [*εμπλαστικόν*, Gr.] Viscous; glutinous; fit to be applied as a plaster.—Refin, by its *emplastick* quality, mixed with oil of roses, perfects the concoction. *Wise man's Surgery.*—*Emplastick* applications are not sufficient to defend a wound from the air. *Arbutnot on Air.*

(2.) **EMPLASTICS**, *n. s.* medicines which constitute and shut up the pores of the body.

EMPLEACHED, *adj.* bound together; interwoven. *Shakespeare.*

* **To EMPLAID**. *v. a.* [from *plead*.] To indict; to prefer a charge against; to accuse.—To terrify and torture them, their tyrannous masters did often *emplaid*, arrest, cast them into prison, and thereby consume them to worse than nothing. *Hayward.*—Antiquity thought thunder the immediate voice of Jupiter, and *emplaid* them of impiety that referred it to natural casualties. *Glanville's Scipio.*

Since none the living villains dare *emplaid*, Arraign them in the persons of the dead.

Dryden's Juvenal.

* **EMPLOY**. *n. s.* [from the verb.] 1. Business; object of industry.—

Present to grasp, and future skill to find,

The whole *employ* of body and of mind. *Pope.*

2. Publick office.—Left animosities should obstruct the course of justice, if one of their own number had the distribution of it, they have always a foreigner for this *employ*. *Addison on Italy.*—The honours and the burdens of great posts and *employs* were joined together. *Atterbury.*

* **To EMPLOY**. *v. a.* [*employer*, French.] 1. To busy; to keep at work; to exercise. It is used both as agent; as, the king employed the minister; or cause, as, the publick credit employed the minister.—

For thrice, at least, in compass of the year,

The vineyard must *employ* the sturdy steer

To turn the glebe. *Dryden's Virgil.*

2. In the following quotations it is used with *in*, *about*, *to*, and *upon*; before the object. *To* seems less proper.—Their principal learning was applied to the course of the stars, and the rest was *employed in* displaying the brave exploits of their princes. *Temple.*—Our reason is often puzzled, because of the imperfection of the ideas is *employed about*. *Locke.*—The proper business of the understanding is not that which men always *employ it to*. *Locke.*—Labour in the beginning gave a right of property, wherever any one was pleased to *employ it upon* what was common. *Locke.*

On the happy change, the boy

Employ'd his wonder and his joy. *Prior.*

—This is a day in which the thoughts of our countrymen ought to be *employed on* serious subjects. *Addison's Freeholder.* 3. To use as an instrument.—

The cleanly cheese-press she could never turn;

Her awkward fist did ne'er *employ* the churn.

Gay's Pastorals.

4. To use means.—The money was *employed to* the making of galleys. 2 *Mac.*—

Peace is not freed from labour, but from noise;

And war more force, but not more pains *employ*s. *Dryden.*

5. To use as materials.—The labour of those who felled and framed the timber *employed about* the plough, must be charged on labour. *Locke.* 6. To commission; to intrust with the management of any affairs.—Jonathan and Jahaziah were *employed about* this matter. *Ezra, x. 15.*—Jesus Christ is furnished with superior powers to the angels, because he is *employed in* superior works, and appointed to be the sovereign Lord of all the visible and invisible worlds. *Watts.* 7. To fill up with business.—

If you're idle you're destroy'd;

All his force on you he tries.

Be but watchful and *employ'd*,

Soon the baffled temper flies.

Motteaux's Don Quixote.

To study nature will thy time *employ*;

Knowledge and innocence are perfect joy.

Dryden.

8. To pass or spend in business.—

Why, whilst we struggle in this vale beneath,

With want and sorrow, with disease and death,

Do they more blest'd perpetual life *employ*

In songs of pleasure, and in scenes of joy. *Prior.*

* **EMPLOYABLE**. *adj.* [from *employ*.] Capable to be used; proper for use.—The objections made against the doctrine of the chymists, seem *employable* against this hypothesis. *Boyle.*

* **EMPLOYER**. *n. s.* [from *employ*.] One that uses or causes to be used.—That man drives a great trade, and is owner or *employer* of much shipping, and continues and increases in trade and shipping. *Child on Trade.*

* **EMPLOYMENT**. *n. s.* [from *employ*.] 1. Business; object of industry; object of labour. 2. Business; the state of being employed. 3. Office; post of business.—If any station, any *employment* upon earth be honourable, theirs was. *Atterbury.*—Leaders on each side, instead of intending the publick weal, have their hearts wholly set to get or to keep *employments*. *Savist.* 4. Business intrusted.—

Call not your stocks for me; I serve the Kings

On whose *employment* I was fitt to you.

Shakef. King Lear.

EMPNEUMATOSIS, [*εμπνευμασις*, Gr.] the alternate dilatation of the chest, by which the air is inhaled and communicated to the blood.

* **To EMPOISON**. *v. a.* [*empoisonner*, French.]

1. To destroy by poison; to destroy by venomous food or drugs; to poison.—Leaving no means unattempted of destroying his son, that wicked servant of his undertook to *empoison* him. *Sidney.*—Mushrooms cause the incubus, or mare in the night, therefore the surfeit of them may suffocate and *empoison*. *Bacon.* 2. To taint with poison; to envenom. This is the more usual sense.

* **EMPOISONER**. *n. s.* [*empoisonneur*, French.] One who destroys another by poison.—He is vehemently suspected to have been the *empoisoner* of his wife, thereby to make vacant his bed. *Bacon's Henry VII.*

* **EMPOISONMENT**. *n. s.* [*empoisonnement*, French.] The practice of destroying by poison.—It were dangerous for secret *empoisonnements*. *Bacon.*

EMPOLL,

EMPOLI, a town of Italy, in Tuscany, seated on the Arno, 17 miles SW. of Florence. Lon. 11. E. Lat. 43. 42. N.

EMPONEMA, (from *εμπονω*, Gr. to labour,) be art of improving ground by labour.

EMPOR, a village of Ireland in W. Meath.

EMPORETICK. *adj.* [*εμπορετικος*.] That which is used at markets, or in merchandize.

EMPORIÆ, a double city of the Hither Spain, on the Pyrenees; separated by a wall; one part occupied by the Greeks of Phocæa, whence originally are the Massilienses; the other, by native pariards, to whom was added by Augustus a Roman colony. It is now called **AMPURIAS**; thich see.

(1.) **EMPORIUM**. *n. f.* [*εμποριον*.] A place for merchandize; a mart; a town of trade; a commercial city.—

And while this fam'd *emporium* we prepare,
The British ocean shall such triumphs boast,
That those who now disdain our trade to share,
Shall rob like pirates on our wealthy coast.

Dryden.

I take the prosperous estate of this great *emporium* to be owing to those instances of charity.

(2, 3.) **EMPORIUM**, in ancient geography, the name of two cities in Italy, near Placentia; the one well fortified, and guarded by a strong garrison, at which Hannibal met a repulse: the other, Hannibal took and plundered. They are now thought to be to *Ponte Nura*, in Placentia.

(4.) **EMPORIUM**, in medicine, is often used for common sensory in the brain. See **BRAIN**.

EMPOVERISH. *v. a.* [*pauvre*, French.] To make poor; to depauperate; to reduce to digence.—Since they might talk better as they lay together, they *empoverished* their cloaths to enrich their bed, which, for that night, might tell from the shrine of Venus. *Sidney*.—

Your's sounds aloud, and tells us you excel
No less in courage than in singing well;
While, unconcern'd, you let your country
know,

They have *empoverish'd* themselves, not you.

Walker.

For sense of honour, if it *impoverisheth* a man, is, in his esteem, neither honour nor sense.

Fresh roses bring,
To strow my bed, 'till the *empoverish'd* Spring
Confess her want.

Prior.

To lessen fertility; as, tillage *impoverishes* land.

EMPOVERISHER. *n. f.* [from *empoverish*.]

One that makes others poor. 2. That which impairs fertility.—They destroy the weeds, and till the land for after crops, being an improver, and not an *empoverisher* of land. *Mortimer*.

EMPOVERISHMENT. *n. f.* [from *empoverish*.] Depauperation; cause of poverty; drain of wealth.—Being paid as it is, now some, and then some, it is no great burden unto her, nor any great *empoverishment* to her coffers. *Spenser's State of Ireland*.—All appeals for justice, or appellations for favour or preferment to another country, are so many grievous *impoverishments*. *Swift's View of Ireland*.

EMPOWER. *v. a.* [from *power*.] 1. To

authorize; to commission; to give power or authority to any purpose.—You are *empowered*, when you please, to give the final decision of wit. *Dryden's Juv. Dedication*.—The government shall be *empowered* to grant commissions to all Protestants whatsoever. *Swift*. 2. To give natural force; to enable.—Does not the same power that enables them to heal, *empower* them to destroy. *Baker on Learning*.

EMPRESS. *n. f.* [contracted from *emperess*, which is retained by *Jonson* in the following lines.] 1. The queen of an emperor.—

Let your nimble feet

Tread subtle circles, that may always meet

In point to him; and figures, to express

The grace of him, and his great *emperess*.

Ben Jonson.

2. A female invested with imperial dignity; a female sovereign.—

Empress of this fair world, resplendent Eve!

Milton.

Yet, London, *empress* of the northern clime,

By an high fate thou greatly didst expire. *Dryd.*

Wisdom, thou say'st, from heav'n receiv'd
her birth;

Her beams transmitted to the subject earth:

Yet this great *empress* of the human soul,

Does only with imagin'd power controul,

If restless passion, by rebellious sway,

Compels the weak usurper to obey. *Prior.*

EMPRISE. *n. f.* [*emprise*, French.] Attempt of danger; undertaking of hazard; enterprise.—

Noble minds, of yore, allied were

In brave pursuit of chivalrous *emprise*. *F. Queen.*

A double conquest must you make,

If you atchieve renown by this *emprise*. *Fairfax.*

Fierce faces threat'ning wars;

Giants of mighty bone, and bold *emprise*. *Milt.*

Thus, 'till the sun had travell'd half the skies,
Ambush'd we lie, and wait the bold *emprise*.

Pope's Odyssey.

EMPROSTHOTONOS, a species of convulsion, wherein the head bends forward.

EMPTIER. *n. f.* [from *empty*.] One that empties; one that makes any place void by taking away what it contained.—The *emptiers* have emptied them out, and married their vine-branches. *Nabum*, ii. 2.

EMPTINESS. *n. f.* [from *empty*.] 1. Absence of plenitude; inanity.—

Where cities stood,

Well fenced, and numerous, desolation reigns,

And *emptiness*; dismay'd, unfed, unhous'd,

The widow and the orphan stroll. *Philips.*

2. The state of being empty.—

His coffers found

With hollow poverty and *emptiness*.

Shakef. Henry IV.

3. A void space; vacuity; *vacuum*.—

Nor could another in your room have been,

Except an *emptiness* had come between. *Dryden.*

—The ordinary air in which we live and respire, is of so thin a composition, that sixteen thousand one hundred and forty-nine parts of its dimensions are mere *emptiness*, and nothing; and the remaining one only, material and real substance. *Bentley.*

4. Want of substance or solidity.—'Tis thus which
causes the graces and the loves to take up their
habitations

habitations in the hardest marble, and to subsist in the emptiness of light and shadow. *Dryden's Dufresnoy, Pref.* 5. Unsatisfactoriness; inability to fill up the desires.—

O frail estate of human things,
Now to our cost your emptiness we know. *Dryd.*
—Form the judgment about the worth or emptiness of things here, according as they are or are not of use, in relation to what is to come after. *Atterbury.* 6. Vacuity of head; want of knowledge.—

Eternal smiles his emptiness betray,
As shallow streams run dimpling all the way.

Pope.
* EMPTION. *n. f.* [emptio, Latin.] The act of purchasing; a purchase.—There is a dispute among the lawyers, whether Glaucus has exchanging his golden armour with the brazen one of Tydides, was emption or commutation. *Arbutnot on Coins.*

* EMPTY. *adj.* [emitig, Saxon.] 1. Void; having nothing in it; not full.—I did never know so full a voice issue from you empty a heart; but the saying is true, the empty vessel makes the greatest sound. *Shakesp. Henry V.*—The pit was empty, there was no water in it. *Gen. xxxvii.*—If you have two vessels to fill, and you empty one to fill the other, you gain nothing by that; there still remains one vessel empty. *Burnet's Theory.* 2. Evacuated; no longer full.—

Himself he frees by secret means unseen,
His shackles empty left, himself escaped clean.

3. Devoid; unfurnished.—

Art thou thus boldened, man, by thy distress,
That in civility thou seem'st to empty? *Shakesp.*
—Mr Boyle has shewed, that air may be rarefied above ten thousand times in vessels of glass; and the heavens are much emptier of air than any vacuum we can make below. *Newton.* 4. Unsatisfactory; unable to fill the mind or desires.—Pleased in the silent shade with empty praise.

Pope.
5. Without any thing to carry; unburthened; unfreighted.—They beat him and sent him away empty. *Matt.*—When ye go, ye shall not go empty. *Exodus.*—He alleges that the satyrs carried platters full of fruit in their hands; but if they had been empty handed, had they been ever the larger satyrs? *Dryden's Juv. Dedication.*—

Yet all the little that I got, I spent;
And still return'd as empty as I went. *Dryd. Virg.*
6. Hungry.—

My falcon now is sharp and passing empty,
And till the stoop, she must not be full-gorg'd,
For then she never looks upon her lure. *Shakesp.*
7. Vacant of head; ignorant; unskilful; unfurnished with materials for thought.—How comes it that so many worthy and wise men depend upon so many unworthy and empty headed fools! *Raleigh.*—His answer is a handsome way of exposing an empty, trifling, pretending pedant; the wit lively, the satyr courtly and severe. *Felton on the Claspicks.* 8. Unfruitful; barren.—Seven empty ears blasted with the east wind. *Genesis.*—Israel is an empty vine. *Hosea.* 9. Wanting substance; wanting solidity; vain.—

The god of sleep there hides his heavy head,
And empty dreams on every leaf are spread.

Dryden's Lucan.
(1.) * To EMPTY. *v. a.* [from the adjective.] To evacuate; to exhaust; to deprive of that which was contained in it.—

Boundless intemperance,
In nature is a tyranny; it hath been
Th' untimely emptying of the happy throne,
And fall of many kings. *Shakesp. Macbeth.*
—The emptiers have emptied them out, and mairied their vine-branches. *Nab. ii. 2.*—Sheep are often blind by fulness of blood: cut their tails and empty them of their blood. *Mortimer's History.*
bandry.—The Euxine sea is conveniently situated for trade, by the communication it has both with Asia and Europe, and the great navigable river that empty themselves into it. *Arbutnot.*

(2.) To EMPTY, in modern metaphorical language, is often, but erroneously, used for to run. Nothing is more common among geographers than to say that a river empties itself into another river, a sea or an ocean, yet no mode of expression can be more absurd. Metaphors should never be used where the expression adopted conveys an idea directly contrary to the fact. No river ever emptied itself since the creation, while the 4 rivers of paradise first began to run. But a rivulet does not empty itself, when in hot weather its small stream is dried up, and its channel left empty.

* To EMPURPLE. *v. a.* [from purple.] To make of a purple; to discolour with purple.—Now in loose garlands, thick thrown off,
Bright

Pavement, that like a sea of jasper shone,
Empurpled with celestial roses smil'd. *Milton.*
The deep,
Empurpled ran, with gushing gore distain'd. *Pope.*

EMPUS, a town of France, in the department of the Var, 5 miles NW. of Draguignan.

* To EMPUZZLE. *v. a.* [from puzzle.] To perplex; to put to a stand.—It hath empuzzled the enquiries of others to apprehend, and confound them unto strange conceptions to make of *Brown.*

(1.) EMPYEMA. See MEDICINE, Index.
(2.) * EMPYEMA. *n. f.* [ἐμψύημα.] A collection of purulent matter in any part whatsoever; generally used to signify that in the cavity of the breast, and which sometimes happens upon the opening of abscesses, or ulcerations of the lungs or membranes inclosing the breast. *Quincy.*—Empyema, or a collection of purulent matter in the breast, it not suddenly cured, doth undoubtedly impel the patient into a phthisical consumption. *Harvey.*—There is likewise a consumption from an empyema, after an inflammation of the lungs, which may be known from a weight upon the diaphragm, oppression of the lungs, a difficulty of breathing, and inability to lie on one side, which is that which is found. *Arbutnot on Diet.*

(1.) * EMPYREAL. *adj.* [ἐμψύεος.] Formed of the element of fire; refined beyond aerial; pertaining to the highest and purest region of heaven [Tickell accents it on the penult.]

Now went forth the morn,

Such as in highest heav'n, array'd in gold

Empyreal. *Milt. Par. Lof.*

Go, soar with Plato to th' *empyrean* sphere,

To the first good, first perfect, and first fair.

Pope.

But *empyrean* forms, howe'er in fight
Gash'd and dismember'd, easily unite. *Tickell.*

(1.) *EMPYREAL AIR*, the name given by Dr
Burns to that which Dr Priestley calls *dephlogis-*
ted air; other philosophers *vital* or *pure air*,
the French chymists *Oxigenous Gas*.

(2.) *EMPYREAN.* *n. f.* [*ἔμπερος*.] The highest
where the pure element of fire is supposed
to dwell.—

Almighty Father from above,
From the pure *empyrean*, where he sits
High thron'd above all height; bent down his
eye. *Milton.*

Under his burning wheel
The steadfast *empyrean* shook throughout,
And the throne itself of Gd: *Milt. Par. Lof.*

The *empyrean* rung
With hallelujahs. *Milt. Par. Lof.*

(3.) *EMPYREUM*, a term used by divines for
the highest heaven, where the blessed enjoy the
highest vision. The word is blessed of us and we
because of its splendor.

(4.) *EMPYREUM.* } *n. f.* [*ἔμπερος*.] The burn-
ing *EMPYREUMA.* } ing of any matter in boi-
le distillation, which gives a particular offen-
sive smell. *Quincy.*—It is so far from admitting an
essence, that it burns clear away without leav-
ing cinders, or dust about it. *Harvey.*—The
essence of an elixir insensibly evaporate, and vanish
in, or leave in the recipient a foul *empyreuma*.
of Piety.

EMPYREUMATICAL. *adj.* [from *empyreum*.]
Having the smell or taste of burnt substan-
ce—*Empyreumatical* oils, distilled by strong fires
in retorts, may be brought to emulate essential
drawn in limicks. *Boyle.*

EMPYROSIS. *n. f.* [*ἔμπερος*.] Conflagration;
a fire.—The former opinion that held these
flames and *empyroses* universal, was such as
that it put a total consummation unto things
in the lower world, especially that of conflagra-
tion. *Hale's Origin of Mankind.*

EMERODS. See *EMERODS* and *MEDICINE*,
v.

(1.) *EMS*, a river of Germany. See *EMS*, N° 1.

(2.) *Em*, a town of Germany. in the circle of
Upper Rhine, and principality of Hesse Darm-
stadt, 7 miles ESE. of Coblenz.

EMSAUGH, a village in Cumberland.

EMSBACH, a river of Germany, in the circle
of Lower Rhine, which runs into the Lahne,
about 5 miles E. from Limburg, in the electorate of
Hesse.

EMSCOT, a village NE. of Warwick.

EMSHAW, in Yorkshire near Skipton.

EMSTREE, SE. of Shrewsbury, Salop.

EMSWELL, SW. of Kilham, Yorkshire.

EMSWORTH, near Eastbourne, Sussex.

(3.) *EMULATE.* *v. a.* [*ἔμουλος*, Latin.] 1. To
strive, to propose as one to be equalled or excel-

led. 2. To imitate with hope of equality, or su-
perior excellence.—

I would have

Him *emulate* you: 'tis no shame to follow

The better precedent. *Ben Jonson's Catiline.*

Those fair ideas to my aid I'll call,

And *emulate* my great original. *Dryd. Aurengz.*

What though no weeping loves thy aches
grace,

Nor polish'd marble *emulate* thy face. *Pope.*

3. To be equal to; to rise to equality with.—

I see how thy eye would *emulate* the diamond.

Shakefp.

We see no new-built palaces aspire,

No kitchens *emulate* the vestal fire. *Pope.*

4. To imitate; to copy; to resemble.—It is like-
wise attended with a delirium, fury, and an in-
voluntary laughter, the convulsion *emulating* this
motion. *Arbutnot.*

(1.) * *EMULATION.* *n. f.* [*emulatio*, Lat.] 1.
Rivalry; desire of superiority.—

Mine emulation

Hath not that honour in't it had; for where

I thought to crush him in an equal force,

True sword to sword, I'll pitch at him some way,
Or wrath or craft may get him. *Shakefp. Cor.*

—There was neither envy nor *emulation* amongst
them. 1. *Mac.*—Aristotle allows that some *emula-*
tion may be good, and may be found in some good
men; yet envy he utterly condemns, as wicked
in itself, and only to be found in wicked minds.
Spratt.—The apostle exhorts the Corinthians to
an holy and general *emulation* of the charity of
the Macedonians, in contributing freely to the re-
lief of the poor saints at Jerusalem. *South.*

A noble *emulation* heats your breast,

And your own fame now robs you of your rest:

Good actions still must be maintain'd with good,

As bodies nourish'd with resembling food. *Dryd.*

2. Envy; desire of depressing another; contest;
contention; discord.—

What madnes's rules in brainick men,

When for so slight and frivolous a cause,

Such factious *emulations* shall arise! *Shakefp.*

(2.) *EMULATION* may be defined a generous
ardor kindled by the praise worthy examples of
others, which impels us to imitate, to rival, and,
if possible, to excel them. This passion involves
in it esteem of the person whose attainments or
conduct we emulate, of the qualities and actions
in which we emulate him, and a desire of resem-
blance, together with a joy springing from the
hope of success. The word comes originally from
the Greek *ἔμυλος*, *contest*; whence the Latin, *emu-*
lus, and thence our *emulation*. Plato makes *emu-*
lation the daughter of envy; if so, there is a great
difference between the mother and the offspring;
the one being a virtue, and the other a vice. *Emu-*
lation admires great actions, and strives to imitate
them; envy refuses them the praises that are their
due; emulation is generous, and only thinks of
equalling or surpassing a rival; envy is low, and
only seeks to lessen him. It would therefore be
more proper to suppose emulation the daughter
of admiration: admiration being a principal in-
gredient in the composition of it.

* *EMULATIVE.* *adj.* [from *emulate*.] Inclined
to emulation; rivaling; disposed to compe-
tition.

* *EMULATOR.* *n. f.* [from *emulate*.] A rival;

a competitor.—In superiours it quencheth jealousy, and layeth their competitors and emulators asleep. *Bacon's Essays.*

* To EMULE. *v. a.* [*emulor*, Latin.] To emulate. Not in use.—

He fitting me beside, in that same shade,
Provoked me to play some pleasant fit;
Yet *emuling* my pipe, he took in hand
My pipe, before that *emul* of many,
And plaid thereon; for well that skill he could.

Spenser.

* To EMULGE. *v. a.* [*emulgeo*, Latin.] To milk out.

(1.) * EMULGENT. *adj.* [*emulgens*, Latin.]
1. Milking or draining out. 2. *Emulgent* vessels [in anatomy] are the two large arteries and veins which arise, the former from the descending trunk of the aorta, or great artery; the latter from the vena cava. They are both inserted into the kidneys; the emulgent arteries carrying blood with the serum to them, and the emulgent veins bringing it back again, after the serum has been separated therefrom by the kidneys. *Harris.*—It doth furnish the left *emulgent* with one vein. *Brown.*—Through the *emulgent* branches the blood is brought to the kidneys, and is there freed of its serum. *Cheyne.*

(2.) EMULGENT, or RENAL, ARTERIES, those which supply the kidneys with blood; being sometimes single, sometimes double, on each side. See ANATOMY, § 400.

* EMULOUS. *adj.* [*emulus*, Latin.] 1. Rivaling; engaged in competition.—

What the Gaul or Moor could not effect,
Nor *emulous* Carthage, with their length of spite,
Shall be the work of one. *Ben Jonson's Castiline.*
—She is in perpetual diffidence, or actual enmity with her, but always *emulous* and suspicious of her. *Howe's Vocal Forest.* 2. Desirous of superiority; desirous to rise above another; desirous of any excellence possessed by another: with *of* before the object of emulation.—

By strength

They measure all, of other excellence

Not *emulous*, nor care who them excels. *Milton.*

By fair rewards our noble youth we raise

To *emulous* merit, and to thirst of praise. *Prior.*

Good Howard, *emulous* of the Grecian art.

Prior.

3. Factious; contentious.—

Whose glorious deeds, but in the fields of late,
Made *emulous* missions 'mougt the gods themselves,

And drave great Mars to faction. *Shakespeare.*

* EMULOUSLY. *adv.* [from *emulous*.] With desire of excelling or outgouing another.—

So tempt they him, and *emulously* vie
To bribe a voice, that empires would not buy.

Granville.

(1.) * EMULSION. *n. f.* [*emulso*, Latin.] A form of medicine, by bruising oily seeds and kernels, and drawing out their substances with some liquor, that thereby becomes milky. *Quincy.*—The aliment is dissolved by an operation resembling that of making an *emulsion*; in which operation the oily parts of nuts and seeds, being gently ground in a marble mortar, and gradually mixed with some watery liquor, or dissolved into a sweet,

thick, turbid, milky liquor, resembling the chyle in an animal body. *Arbutnot on Aliments.*

(2.) EMULSION. See PHARMACY, Index.

(1.) * EMUNCTORIES. *n. f.* [*emundorium*, Latin.] Those parts of the body where any thing excrementitious is separated and collected, to be in readiness for ejection. *Quincy.*—Superfluous matter descends from the body under their proper *emundories*. *Brown's Vulgar Errors.*—There are receptacles in the body of man, and *emundories* to drain them of superfluous choler. *More again Arbutnot on Diet.*

(2.) EMUNCTORIES, in anatomy, are cited the kidneys, bladder, and most of the glands.

EMUNGS, one of the Pelew islands.

EMY VALE, a valley of Ireland in Monaghan.

* EN. An inseparable particle borrowed from the French, and by the French from Latin *in*. Many words are uncertainly written with *en* or *in*. In many words *en* is changed to *em* for more easy pronunciation.

* To ENABLE, *v. a.* [from *able*.] To make able; to empower; to supply with strength or ability.—

If thou would'st vouchsafe to overspread
Me with the shadow of thy gentle wing,
I should *enabled* be thy acts to sing.

Spenser's Hymn on Love.

—His great friendship with God might *enable* him, and his compassion might incline him. *Attwood.*

—He points out to him the way of life, strengthens his weakness, restores his lapses, and enables him to walk and persevere in it. *Rogers.*

ENABY, a town of Sweden, in the province of East Gothland, 25 miles S. of Linköping.

* ENACT. *n. f.* [from the verb.] Purpose or termination.

* To ENACT. *v. a.* [from *act*.] To act; to form; to effect. Not now in use.—In true being of justice, it is flat wrong to punish the thief or purpose of any before it be *enacted*. *Spenser.*

Valiant Talbot, above human thought,
Enacted wonders with his sword and lance.

Shakespeare.

2. To establish by law; to decree.—

It is *enacted* in the laws of Venice,

If it be proved against an alien,

He seeks the life of any citizen,

The party, 'gainst the which he doth contend,
Shall seize on half his goods.

Shakespeare.

—The senate were authors of all counsels in state; and what was by them consulted and decreed, was proposed to the people, by whom it was *enacted* or commanded. *Temple.* 3. To present by action.—

I did *enact* Hector.

Shakespeare.

* ENACTOR. *n. f.* [from *enact*.] 1. One who forms decrees, or establishes laws.—The

Author.

Author of our nature, and *enactor* of this law of good and evil, is highly dishonoured. *Atterbury*.
1. One who practises or performs any thing. Not used.—

The violence of either grief or joy,
Their own *enactors* with themselves destroy.

Shakspeare.

(1.) * **ENALLAGE.** *n. f.* [*εναλλαγή*.] A figure in grammar, whereby some change is made of the common modes of speech, as when one mood or tense of a verb is put for another.

(2.) **ENALLAGE** is also used when one word is put for another of the same part of speech: A substantive for an adjective; as *exercitus victor*, or *victoriosus*; *seelus*, for *selestus*: A primitive for a derivative; as *Dardana arma*, for *Dardania*: An active for a passive; as *nox humida celo precipitat*, for *precipitatur*, &c.

* **TO ENAMBUSH.** *v. a.* [from *ambush*.] To hide in ambush; to hide with hostile intention.—

They went within a vale, close to a flood,
whose stream

U'd to give all their cattle drink, they there
enambush'd them. *Chapman's Iliad.*

(1.) * **ENAMEL.** *n. f.* [from the verb.] 1. Any thing enamelled, or variegated with colours fixed by fire.—

Down from her eyes welled the pearly round,
Upon the bright *enamel* of her face;

Such honey drops on springing flowers are
found,

When *Phœbus* holds the crimson morn in chace.

Fairfax.

There are various sorts of coloured glasses, called, *enamels*, and factitious gems. *Woodw. rid. Fossils.* 2. The substance inlaid in other things.

(3.) **ENAMEL**, in general, is a vitrified matter without the parts of which is dispersed some unvitrified matter: hence enamel ought to have all the properties of glass except transparency. Enamels have for their basis a pure crystal glass or t. ground up with a fine calx of lead and tin prepared for the purpose, with the addition usually of white salt of tartar. These ingredients beat together are the matter of all enamels, which is made by adding colours of this or that kind of powder to this matter, and melting or incorporating them together in a furnace. For white enamel, *Neri (De Arte Vitriar.)* directs only manganese to be added to the matter which constitutes the basis. For azure, zaffer mixed with calx of brass. For green, calx of brass with scales of iron, or with crocus martis. For black, zaffer with manganese or with crocus martis: or mannikin with tartar. For red, manganese, or calx of copper and red tartar. For purple, manganese with calx of brass. For yellow, tartar and mannikin. And for violet-coloured enamel, manganese with thrice calcined brass. In making these enamels, the following general cautions are necessary to be observed. 1. That the pots must be glazed with white glass, and must be such as will bear the fire. 2. That the matter of enamels must be very nicely mixed with the colours. 3. When the enamel is good, and the colour well incorporated, it must be taken from the fire with a pair of tongs. 4. The general way of making the coloured enamel is this: Powder, sift, and

grind, all the colours very nicely, and first mix them with one another, and then with the common matter of enamels: then set them in pots in a furnace; when well mixed and incorporated, cast them into water; when dry, set them in a furnace again to melt; and when melted, take a proof of them. If too deep-coloured, add more of the common matter of enamels; and if too pale, add more of the colours. Enamels are used either in imitating precious stones, in painting in enamel; or by enamellers, jewellers, and goldsmiths, in gold, silver, or other metals. The two first kinds are usually prepared by the workmen themselves, who are employed in these arts. That used by jewellers, &c. is brought to us chiefly from Venice or Holland, in little cakes of different sizes, commonly about four inches diameter, having the mark of the maker stuck upon it with a punchon. It pays 1s. 4 $\frac{1}{2}$ d. the pound on importation, and draws back 1s. 5 $\frac{1}{2}$ d. at the rate of 4s. per pound.

(3.) **ENAMEL, METHOD OF PAINTING IN.**

This is performed on plates of gold or silver, and most commonly of copper. enamelled with the white enamel; whereon they paint with colours which are melted in the fire; where they take a brightness and lustre like that of glass. This painting is the most prized of all for its peculiar brightness and beauty, which is very permanent, the force of its colours not being effaced or faded with time as in other painting, and continuing always as fresh as when it came out of the workmen's hands. It is used in miniatures; it being the more difficult the larger it is, by reason of certain accidents it is liable to in the operation. Enamelling should only be practised on plates of gold, the other metals being less pure: copper, for instance, scales with the application, and yields fumes; and silver turns the yellow white. Nor must the plate be made flat; for in such case, the enamel cracks; to avoid which they usually forge them a little round or oval; and not too thick. The plate being well and evenly forged, they usually begin the operation by laying on a couch of white enamel on both sides, which prevents the metal from swelling and blistering; and this first layer serves for the ground of all the other colours. The plate being thus prepared, begin at first by drawing out exactly the subject to be painted with red vitriol, mixed with oil of spike, marking all parts of the design very lightly with a small pencil. After this, the colours (which are before ground with water in a mortar of agate extremely fine, and mixed with oil of spike somewhat thick) are to be laid on, observing the mixtures and colours that agree to the different parts of the subject; for which it is necessary to understand painting in miniature. But here the workman must be very cautious of the good or bad qualities of the oil of spike he employs to mix his colours with, for it is very subject to adulterations. Great care must likewise be taken, that the least dust imaginable come not near the colours while painting or grinding them; for the smallest speck worked up with it, when the work comes to be put into the reverberatory to be red hot, will leave a hole, and so deface the work. When the colours are all laid, the painting must be gently dried

Ccc

dried over a slow fire to evaporate the oil, and the colours afterwards melted to incorporate them with the enamel, making the plate red-hot in the fire. Afterwards that part of the painting must be passed over again which the fire has in the least effaced, strengthening the shades and colours, and committing it again to the fire, observing the same method as before, which is to be repeated till the work be finished.

(4.) ENAMEL, WHITE. The preparation of the white enamel is a very essential article in making delft ware, and one in which many artists fail. The sand must be perfectly vitrified to form a fusible glass. Somewhat less than an equal part of alkaline salt, or twice its weight of calx of lead, is requisite to effect such vitrifications of sand. The calx of tin is not intended to be vitrified, but to give a white opaque colour to the mass; and one part of it is to be added to 3 or 4 parts of all the other ingredients taken together. From these general principles, various enamels may be made to suit the different kinds of earths. To make the enamel, lead and tin are calcined together with a strong fire; and the sand is also to be made into a frit with the salt or ashes. The whole is then to be well mixed and ground together. This matter is then to be placed under the surface, where it is melted and vitrified during the baking of the ware. It is next to be ground in a mill, and applied, as directed under Delft, § 2. M. Bosc d'Antic, in a Memoir concerning this kind of ware, published in the *Mém. des Savans Etrangers*, tom. 6. recommends the following proportions: 100 lb. of calx of lead are to be mixed with about a 7th part of that quantity of calx of tin for common delft ware, or a 4th part of calx of tin for the finest kind; 100 or 110 lb. of fine sand; and about 20 or 30 lb. of sea-salt.

(1.) * To ENAMEL. v. a. [from *enamel*. See *AMEL*.] 1. To inlay; to variegate with colours, properly with colours fixed by fire.—

Must I, alas!

Frame and enamel plate, and drink in glass?

Donne.

See Pan with stocks, with fruits Pomona crown'd;

Here blushing Flora paints th' enamel'd ground.

Pope.

—I bequeath to the earl of Orrery the enamel'd silver plates, to distinguish bottles of wine by. *Swift's Last Will*. 2. To lay upon another body so as to vary it.—

Higher than that wall, a circling row

Of goodliest trees, loaden with fairest fruit,

Blossoms, and fruits at once of golden hue,

Appear'd with gay enamel'd colours mix'd.

Milton.

(2.) * To ENAMEL. v. n. To practise the use of enamel.—Though it were foolish to colour or enamel upon the glasses of telescopes, yet to gild the tubes of them may render them more acceptable to the users, without lessening the clearness of the object. *Boyle.*

* ENAMELLER. n. s. [from *enamel*.] One that practises the art of enamelling.

(1.) ENAMELLING, the art of laying enamel upon metals, as gold, silver, copper, &c. and of melting it at the fire, or of making divers curious

works in it at a lamp. It signifies also to paint in enamel. See ENAMEL, § 3.

(2.) ENAMELLING BY THE LAMP. Most enamelled works are wrought at the fire of a lamp, in which, instead of oil, they put melted horse-grease, which they call *caballine oil*. The lamp, which is of copper, or white iron, consists of two pieces; in one of which is a kind of oval pipe six inches long, and two high, in which they put the oil and the cotton. The other part, called the *box*, in which the lamp is inclosed, serves only to receive the oil which boils over by the force of the fire. This lamp, or, where several artists work together, two or three more lamps are placed on a table of proper height. Under the table about the middle of its height, is a double pair of organ bellows, which one of the workmen moves up and down with his foot to quicken the flame of the lamps, which are by this means excited to an incredible degree of vehemence. Ground made with a gauge in the upper part of the table and covered with parchment, convey the wind to the bellows to a pipe of glass before each lamp, and that the enamellers may not be incommoded with the heat of the lamp, every pipe is covered at six inches distance with a little tin plate, fast into the table by a wooden handle. When the works do not require a long blast, they only use glass pipe, into which they blow with the mouth. It is incredible to what a degree of fineness and delicacy the threads of enamel may be drawn at a lamp. Those which are used in making false hair or feathers are so fine, that they may be wound on the reel like silk or thread. The fictitious of all colours, used in embroideries, are also made of enamel; and that with so much art, that every small piece hath its hole to pass the thread through wherewith it is sewed. These holes are made by blowing them into long pieces; when they afterwards cut with a proper tool. The Venetian or Dutch enamels are seldom used alone; they are commonly melted in an iron ladle, with an equal part of glass or crystal; and when these two matters are in perfect fusion, they are drawn out into threads of different sizes, according to the nature of the work. They take it out of the ladle while liquid, with two pieces of broken tobacco pipes, which they extend from each other at arm's length. If the thread is required longer, then another workman holds one end, and continues to draw it out, while the first holds the enamel to the flame. Those threads, when they are cut into what lengths the workman thinks, but commonly from 10 to 12 inches; and as they are all round, if they are required to be flat, they must be drawn through a pair of pinchers which yet hot. They have also another iron instrument in form of pinchers, to draw out the enamel from the lamp when it is to be worked and disposed in figures. Lastly, they have glass-tubes of various sizes, serving to blow the enamel into various figures, and preserve the necessary vacancies therein; as also to spare the stuff, and form the colours. When the enameller is at work, he sits before the lamp with his foot on the step, and moves on the bellows; and holding in his right hand the work to be enamelled, or the brass or iron wires the figures are to be formed on, he

with his right the enamel thread, which he sets to the flame with a management and patience equally surprising. There are few things cannot make or represent with enamel; and the figures are as well finished, as if done by most skilful carvers.

TO ENAMOUR. *v. a.* [*amour*, French.] To love with love; to make fond: with *of* before thing or person loved.—

Affliction is *enamoured* of thy parts, and thou art wedded to calamity. *Shakefp.*

My Oberon! What visions have I seen! thought I was *enamoured* of an ass. *Shakefp.* You are very near my brother in his love: he is *enamored* on Hero. *Shakefp. Much Ado about Nothing.*

Or should she, confident, be sitting queen ador'd on beauty's throne, descend with all her winning charms begirt, *enamoured*, as the zone of Venus once brought that effect on Jove, so fables tell. *Milk.*

He, on his side, leaning half-raised, with looks of cordial love hung over her *enamoured*. *Milk. Par. Lost.*

Your uncle cardinal is not so far *enamoured* of a cloyster, but he will thank you for the crown. *Dryden.* Too hard to discern whether is in the greatest trust, he who is *enamoured* of all he does, or he on nothing of his own can please. *Dryden (Hyms).*

ENANGIOMONOSPERMOUS, *adj.* [from *en*, upon, a vessel, *monos*, alone, and *sperma*, a seed,] many, having but one seed in the vessel.

ENAREA, a province of Abyssinia, conquered the troops of Negus, at the beginning of the 17th century, situated at the SW. extremity of empire.

ENARRATION. *n. f.* [*enarra*, Latin.] Exposition; exposition. *DiB.*

ENARTHROSIS. *n. f.* [*en* and *arthros*,] insertion of one bone into another to form a *l.*—*Enarthrosis* is where a good round head is into a cavity, whether it be a cotyla, or proud cavity, as that of os coxae, receiving the head of the os femoris; or glene, which is more low, as in the scapula, where it receives the humerus. *Wise man's Surgery.*

ENARTHROSIS, in anatomy, is a species of *arthrosis*. See *ANATOMY*, § 103.

ENATATION. *n. f.* [*enato*, Latin.] The swimming out; escape by swimming. *DiB.*

ENAUTER. *adv.* An obsolete word used by *Spenser* himself to mean *lest that*.—*Enauter* would not let him speak to the tree, *Enauter* his rage might cooled bee, *Enauter* to the root bent his sturdy stroke.

Spenser's Pastorals. **ENBAR**, a town of Asiatic Turkey, in the A. link, on the Euphrates, 40 miles W. of *ad.*

ENBOROUGH, a town in Somersetshire.

ENBOURN, E. and W. near Newberry, Berks.

ENBYCHWORTH, SW. of Barnsley, York.

ENCBENIA, [*enaben*, Gr.] the name of three celebrated by the Jews, in memory of the *enaben*, or rather purification, of the temple, *enaben* Maccabees, Solomon, and Zorobabel.

The term is likewise used in church history for the dedication of Christian churches.

*** TO ENCAGE.** *v. a.* [from *cage*.] To shut up as in a cage; to coop up; to confine.—

He suffer'd his kinsman March, Who is, if every owner were right plac'd, Indeed, his king, to be *encag'd* in Wales, There without ransom to lie forfeited.

Shakef. Henry IV. Like Bajazet *encag'd*, the shepherds scoff, Or like slack-line'd Samson, his hair cut off.

Donne. (1.) *** TO ENCAMP.** *v. a.* [from *camp*.] To form an army into a regular camp; to order to encamp.—The people were *encamped* against Gibeon. *Kings.*

(2.) *** TO ENCAMP.** *v. n.* To pitch tents; to sit down for a time in a march; to settle a temporary habitation.—He *encamped* at the mount of God. *Exod. xiii. 5.*—The French knew how to make war with the English, by not putting things to the hazard of a battle, but wearing them by long sieges of towns, and strong fortified *encampings*. *Bacon.*

*** ENCAMPMENT.** *n. f.* [from *encamp*.] 1. The act of encamping, or pitching tents. 2. A camp; tents pitched in order.—Their enemies served to improve them in their *encampments*, weapons, or something else. *Greiv.*

When a gen'ral bids the martial train Spread their *encampment* o'er the spacious plain, Thick rising tents a canvas city build.

Gay's Trivia. **ENCANTHIS**, in surgery, a tubercle arising either from the caruncula lachrymalis, or from the adjacent red skin; sometimes so large, as to obstruct not only the puncta lachrymalia, but also part of the sight or pupil itself. See *SURGERY*.

ENCARPIA, [*enkarpi*, Gr.] in architecture, flower work, or fruit work, on the corners of pillars.

ENCATHISMA, [*enathisma*, Gr.] a bath for the belly.

*** TO ENCAVE.** *v. a.* [from *cave*.] To hide as in a cave.—

Do but *encave* yourself, And mark the scers, the gibes, and notable scorns,

That dwell in ev'ry region of his face; For I will make him tell the tale anew.

Shakef. Othello. **ENCAUMA**, [*enkauma*, Gr.] a burning in any part of the body: a hot ulcer.

ENCAUSTES, [from *en* in, and *causto*, to burn, Gr.] an enameller.

(1.) **ENCAUSTIC**, *adj.* [*enkaustikos*, Gr.] belonging to enamelling, or painting by fire.

(2.) **ENCAUSTIC ART**, the art of enamelling.

(3.) **ENCAUSTIC PAINTING**, a method of painting made use of by the ancients, in which wax was employed to give a gloss to their colours, and to preserve them from the injuries of the air. See *CAYLUS*, and *PAINTING*.

ENCAUSTUM, enamel.

(1.) *** ENCEINTE.** *n. f.* [French.] Inclosure; ground inclosed with a fortification. A military term not yet naturalised.

(2.) **The ENCEINTE** is the wall or rampart which

surrounds a place, sometimes composed of battions or curtains, either faced or lined with brick or stone, or only made of earth. It is sometimes only flanked by round or square towers, which is called a *Roman wall*.

ENCELADUS, in ancient mythology, the son of Titan and Terra; the largest and last of the giants who conspired against Jupiter.

ENCEPHALI, in medicine, worms generated in the head, where they cause so great a pain as sometimes to occasion distraction. The encephali are very rare; but there are some diseases wherein they swarm; from whence we are told pestilential fevers have wholly arisen. Upon the dissection of one who died of this fever, a little, short, red worm was found in the head, which malmsey wine, wherein horse-radish had been boiled, could alone destroy. This medicine was afterwards tried on the sick, most of whom it cured. The same species of worms have also been taken out by trepanning, and the patient cured. Worms that generate in the nose, ears, and teeth, are also called *encephali*.

ENCEPHALON. See *ANATOMY Index*.

* **TO ENCHAFE**. *v. a.* [*enchaffer*, French.] To enrage; to irritate; to provoke.—

The wind shak'd surge, with high and monstrous main,

Seems to cast water on the burning bear,
I never did like molestation view

On the enchafed flood. *Shakes Othello.*

* **TO ENCHAIN**. *v. a.* [*enchainer*, French.]
1. To fasten with a chain; to hold in chains; to bind; to hold in bondage.—

What should I do! while here I am *enchain'd*,
No glimpse of godlike liberty remain'd.

Dryden's Virgil.

2. To link together; to concatenate.—The one contracts and *enchains* his words, speaking pressingly and short; the other delights in long-breathed accents *Houzel.*

* **TO ENCHANT**. *v. a.* [*enchanter*, French.]
1. To give efficacy to any thing by songs of sorcery.—

And now about the cauldron sing,
Like elves and fairies in a ring,
Enchanting all that you put in. *Shakesf. Macbeth.*

These powerful drops thrice on the threshold pour,

And bathe with this *enchanted* juice the door;
That door where no admittance now is found,
But where my soul is ever how'ring round.

Granville.

2. To subdue by charms or spells.—Arcadia was the charmed circle, where all his spirits for ever should be *enchanted*. *Sidney* — John thinks them all *enchanted*: he enquires if Nick had not given them some intoxicating potion. *Arbutnot.* 3. To delight in a high degree.—

One whom the musick of his own vain tongue
Doth ravish, like *enchanted* harmony.

Shakesf. Love's Labour Lost.

Too dear I priz'd a fair *enchanted* face;
Beauty unchaste is beauty in disgrace. *Pope.*

(1.) * **ENCHANTER**. *n. f.* [*enchanteur*, French.] A magician; a forcerer; one who has spirits or demons at his command; one who has the power of charms and spells.—Such phasme,

such apparitions, are excellencies which men applaud in themselves, conjured up by the magic of a strong imagination, and only seen within the circle in which the *enchanter* stands. *Deceit of Pope.* — Gladio, by valour and stratagem, put to death tyrants, *enchanters*, monsters, and knights. *Spettator.*—

Ardan, that black *enchanter*, whose dire and Enslav'd our knights, and broke our virgin hearts. *Graville.*

(2.) **ENCHANTER'S NIGHTSHADE**, in botany. See *CIRCÆA*.

* **ENCHANTINGLY**. *adv.* [from *enchanter*] With the force of enchantment. It is improperly used in a passive sense in the following passages. He's gentle; never school'd, and yet learns full of noble device; of all sorts *enchantingly* bold. *Shakespeare.*

(1.) * **ENCHANTMENT**. *n. f.* [*enchantement*, French.] 1. Magical charms; spells; incantations; sorcery.—The Turks thought that tempests brought upon them by the charms and *enchantments* of the Persian magicians. *Knollys.* 2. A irresistible influence; overpowering delight.—Words of fancy will carry the loudest and most unassuming applause, which holds the heart of a reader in the strongest *enchantment*. *Pope's Preface to Essay.*

(2.) **ENCHANTMENT**. See *CONJURATION*, *FASCINATION*, and *WITCHCRAFT*.

* **ENCHANTRESS**. *n. f.* [*enchantresse*, French.] 1. A forceress; a woman versed in magical arts. Fell banning hag! *enchantress*, hold thy tongue. *Shakespeare.*

—I have it by certain tradition, that it was she to the first who wore it by an *enchantress*. *Tales.* 2. A woman whose beauty or excellencies give a irresistible influence.—

From this *enchantress* all these ills are come
You are not safe 'till you pronounce her done. *Dryden.*

Of with th' *enchantress* of his soul he was
Sometimes in crowds distress'd. *Field.*

ENCHARAXIS, in surgery, [*ενχαρις*, the act of lancing or scarifying.]

* **TO ENCHASE**. *v. a.* [*enchasser*, French.] 1. To infix; to enclose in any other body for to be held fast, but not concealed.—

Like polish'd ivory, beauteous to behold
Or Parian marble, when *enchas'd* in gold.

Dryden's Pl.

—Words, which, in their natural situation, like jewels *enchased* in gold, look, when transposed into notes, as if set in lead. *Feston on the Crit.*

2. To adorn by being fixed upon it.—
What see'st thou there? King Henry's
dem,

Enchas'd with all the honours of the world. *Shakespeare.*

They houses burn, and household gods do die
To drink in bowls which glitt'ring gems *enchase*. *Dryden.*

3. To adorn by raised or embossed work.—
When was old Sherewood's head more equally curl'd,
Or look'd the earth more green upon the vale
Or nature's cradle more *enchas'd* and purr'd. *Ben Jon.*

ENCHASING, **INCHASING**, or **ENCHASING**.

art of enriching and beautifying gold, silver, and other metal work, by some design or figures represented thereon in low relieve. Enchasing is practised only on hollow thin works, as silver punch bowls, tea pots, coffee pots, gold or silver watch cases, cane heads, tweezer cases, and the like. It is performed by punching or driving out the metal, to form a figure, from within, so as to stand out prominent from the plane or surface of the metal. In order to this, they provide a number of fine steel blocks or punches of divers sizes; and the design being drawn on the surface of the metal, they apply the inside upon the heads or tops of these blocks, directly under the lines or parts of the figures; then, with a small hammer, striking on the metal, sustained by the block, the metal yields, and the block makes an indenture or cavity on the inside, corresponding to which there is a prominence on the outside, which is to stand for that part of the figure. Thus the enchafer proceeds to finish all the parts by the successive application of the block and hammer to the several parts of the design. By this simple piece of mechanism, the artists represent foliage, grotesques, animals, histories, &c. with the most striking propriety and beauty.

* **ENCHEASON.** *n. f.* [*encheason*, old law, French.] Cause; occasion. *Skinner, Coewel, Bailey.* Certes, said he, well mote I should to tell The fond *encheason* that me hither led.

Fairy Queen.

ENCHELIDES, animalcules in the form of eels.
See **ANIMALCULE**, § 3.

ENCHELYS, the **ESL**. See **MURENA**.
ENCHENREUTH, a town of Germany, in Franconia; 36 miles ENE. of Bamberg.

ENCHUYSEN, or **ENCKHUYSEN**, a town of the Batavian republic, in the dept. of the Texel, and adjacent prov. of N. Holland. It has a considerable trade in salt fish, but the harbour being much obstructed by sand, cannot admit vessels of the largest size. It has many canals; the streets are clean, and the houses and public buildings handsome. It is seated on a peninsula of the Zuyder Zee, 10 miles NE. of Hoonne, and 28 of Amsterdam. Lon. 5. 14. E. Lat. 52. 45. N.

ENCHYMOMA, or } in physiology, a sudden
ENCHYMOSES, } flow of the blood, occasioned by any passion, such as anger, joy, a sense of shame, or the like. It is also used for that flow of the blood which occasions a continued blush.

* **TO ENCIRCLE.** *v. a.* [from *circle*.] To surround; to environ; to enclose in a ring or circle; to cing.

That stranger guest the Paphian realm obeys,
A realm defended with *encircling* seas.

Pope's Odyssey.

Beneath a sculptur'd arch he sits inthron'd;
The peers *encircling*, form an awful round.

Pope's Odyssey.

* **ENCIRCLET.** *n. f.* [from *circle*.] A circle; a ring.

In whose *encirclets* if you gaze,
Your eyes may tread a lovers maze. *Sidney.*

ENCKENDORP, a town of Germany, in the duchy of Holstein, 6 miles SE. of Rendburg.

ENCKHUYSEN. See **ENCHUYSEN**.

(1.) * **ENCLITICS.** *n. f.* [*enclitica*.] Par-

ticles which throw back the accent upon the foregoing syllable.

(2.) **ENCLITICS**, **ENCLITICA**, in grammar, particles which are so closely united with other words as to seem part of them, as in *virumque*, &c.—There are three enclitic particles in Latin; viz. *que*, *ne*, and *ve*.

* **TO ENCLOSE.** *v. a.* [*enclos*, French.] 1. To part from things or grounds common by a fence.—The protector caused a proclamation to be set forth against enclosures, commanding that they who had *enclosed* lands, accustomed to lie open, should lay them open again. *Hayward*.—As much land as a man tills, and can use the product of, so much he by his labour *encloses* from the common. *Locke*.—For *enclosing* of land, the usual way is with a bank set with quick. *Mortimer's Husbandry*. 2. To environ; to encircle; to surround; to encompass; to shut in between other things; to include.—The fourth row a beryl, and an onyx, and a jasper: they shall be set in their *enclosings*. *Ex. xxviii. 20*.—

The peer now spreads the glitt'ring forfex wide,

T' *enclose* the lock; now joins it, to divide.

Pope.

3. To hold by an exclusive claim.

* **ENCLOSER.** *n. f.* [from *enclose*.] 1. One that encloses or separates common fields in several distinct properties.—

If God had laid all common, certainly
Man would have been th' *encloser*; but since
now

God hath impal'd us, on the contrary,
Man breaks the fence. *Herbert.*

2. Any thing in which another is enclosed.

* **ENCLOSURE.** *n. f.* [from *enclose*.] 1. The act of enclosing or environing any thing.—The membranes are for the comprehension or *enclosure* of all these together. *Wilkin's Math. Magick*. 2. The separation of common grounds into distinct possessions.—*Enclosures* began to be frequent, whereby arable land was turned into pasture. *Bacon's Henry VII.*—Touching *enclosures*, a company of lands inclosed are thereby improved in worth two or three parts at least. *Hayward*. 3. The appropriation of things common.—Let no man appropriate what God hath made common; that is against justice and charity, and by miraculous accidents God hath declared his displeasure against such *enclosure*. *Taylor*. 4. State of being shut up in any place; encompassed, or environed.—This expresses particularly the *enclosure* of the waters within the earth. *Burner's Theory*.—For the young, during its *enclosure* in the womb, there are formed membranes enveloping it, called *secundines*. *Ray*. 5. The space enclosed; the space comprehended within certain limits.—

And all, that else this world's *enclosure* base
Hath great or glorious in mortal eye,

Adorns the person of her majesty. *Fairy Queen*.—They are to live all in a body, and generally within the same *enclosure*; to marry among themselves, and to eat no meats that are not prepared their own way. *Addison's Spectator*. 6. Several ground enclosed; ground separated from the common.—'Tis not the common, but the *enclosure* must make him rich. *South*.

ENCO-

ENCOLAPTICE, [ἐγκολαπτική, Gr.] in antiquity, the art of making brass plates, and engraving inscriptions and laws on them.

ENCOMB, a village in Dorsetshire, near Corfe Castle.

* **ENCOMIAST**. *n. f.* [ἐγκομιᾶστος.] A panegyrist; a proclaimer of praise; a praiser.—The Jesuits are the great *encomiasts* of the Chinese. *Locke.*

* **ENCOMIASTICAL**. *adj.* [ἐγκομιᾶστικόν.] * **ENCOMIASTICK**. } Panegyric; laudatory; containing praise; bestowing praise.

* **ENCOMIUM**. *n. f.* [ἐγκομιῖον.] Panegyric; praise; elogy.—How eagerly do some men propagate every little *encomium* their parasites make of them! *Government of the Tongue.*

A vile *encomium* doubly ridiculous;
There's nothing blackens like the ink of fools.

Pope.

* **To ENCOMPASS**. *v. a.* [from *compass*.] 1. To enclose; to encircle.—

Look how my ring *encompasseth* thy finger;
E'en so thy breast encloseth my poor heart.

Shakespeare.

—Two strong ligaments *encompass* the whole head of the femur. *Wise man's Surgery.*

Poetick fields *encompass* me around,
And still I seem to tread on classic ground.

Addison.

2. To shut in; to surround; to environ.—

He, having scarce six thousand in his troop,
By three and twenty thousand of the French
Was round *encompassed*, and set upon.

Shakespeare. Henry VI.

3. To go round any place; as, *Drake encompassed the world.*

* **ENCOMPASSMENT**. *n. f.* [from *encompass*.] Circumlocution; oblique tendency of talk.—

Finding

By this *encompassment* and drift of question,
That they do know my son, come you more near.

Shakespeare.

* **ENCORE**. *adv.* [French.] Again; once more. A word used at publick shows when a singer, or fiddler, or buffoon, is desired by the audience to do the same thing again.—

To the same notes thy sons shall hum or snore,
And all thy yawning daughters cry *encore*.

Dunciad.

To ENCORE, *v. a.* [from the adverb.] to call for a repetition of a song, speech or tune.

ENCOURBERTO. See **DASYRUS**, N° 9.

* **ENCOUNTER**. *n. f.* [encontre, French.] 1. Duel; single fight; conflict.—

Thou hast beat me out
Twelve several times, and I have nightly since
Dreamt of *encounters* 'twixt thyself and me.

Shakespeare.

Let's leave this keen *encounter* of our wits,
And fall something into a slower method.

Shakespeare.

Pallas th' *encounter* seeks; but ere he throws,
To Tuscan Tiber thus address'd his vows:
O sacred stream, direct my flying dart,
And give to pals the proud Halesus' heart.

Dryden's Æn.

2. Battle; fight in which enemies rush against each other.—

Two black clouds

With heav'n's artillery fraught, come rattling on
Over the Caspian; then stand front to front,
How'ring a space, 'till winds the signal blow

To join their dark *encounter* in mid air. *Milton.*

3. Eager and warm conversation, either of love or anger.—The peaking cornuto comes to me in the infant of our *encounter*, after we had spoke the prologue of our comedy. *Shakespeare.* 4. Accidental congress; sudden meeting.—

Propitious Pallas, to secure her care,
Around him spread a veil of thicken'd air.
To shun th' *encounter* of the vulgar crowd.

Pope's Odyssey.

5. Accosting; transient or unexpected address.—

But in what habit will you go along?
—Not like a woman; for I would prevent
The loose *encounters* of lascivious men. *Shakespeare. Two Gent. of Verona.*

Three parts of Brutus

Is ours already; and the man entire,
Upon the next *encounter*, yields him ours.

Shakespeare.

6. Casual incident; occasion.—This sense is scarcely English.—An equality is not sufficient for the unity of character: 'tis further necessary, that the same spirit appear in all sort of *encounters*. *Pope's View of Epic Poetry.*

(1.) * **To ENCOUNTER**. *v. a.* [from the noun]

1. To meet face to face; to front.—

If I must die,

I will *encounter* darkness as a bride,
And hug it in mine arms.

Shakespeare.

—The fashion of the world is to avoid cost, and you *encounter* it. *Shakespeare. Much Ado about Nothing.*

Thou stronger may'st endure the flood of light;

And, while in shades I hear my fainting sight
Encounter the descending excellence. *Dryden.*

2. To meet in a hostile manner; to rush against in conflict.—Putting themselves in order of battle they *encountered* their enemies. *Knolles's History of the Turks.* 3. To meet with reciprocal kindness.—

See, they *encounter* thee with their hearty thanks;

Both sides are even.

Shakespeare. Macbeth.

4. To attack; to meet in the front.—Which way soever we turn, we are *encountered* with clear evidences and sensible demonstrations of a Deity. *Tillotson.* 5. To oppose; to oppose.—Jurors are not bound to believe two witnesses, if the probability of the fact does reasonably *encounter* them. *Hale.* 6. To meet by accident.—

I am most fortunate thus to *encounter* you:
You have ended my business, and I will merrily
Accompany you home. *Shakespeare. Coriolanus.*

(2.) * **To ENCOUNTER**. *v. n.* 1. To rush together in a hostile manner; to conflict.—

Encounter so,

As doth the fury of two desperate men,
Which, in the very meeting, fall and die.

Shakespeare.

Five times, Marcias,
Have I fought with thee; so often hast thou
beat me;

And

And wouldst do so, I think, should we encounter
As often as we eat. *Shakef. Coriolanus.*

To engage; to fight: it has *with* before the
king—

Our wars

Will turn into a peaceful comick sport,
When ladies crave to be encounter'd *with*.

Shakespeare.

Both the wings of his fleet had begun to encounter
with the Christians. *Knolles's History of the Turks.*
Those who have the most dread of death, must
be content to encounter *with* it, whether they will
or no. *Wake.* 3. To meet face to face: 4. To
come together by chance.

* ENCOUNTERER. *n. f.* [from *encounter*.]
Opponent; antagonist; enemy.—The lion will
kick with his feet, but he will strike such a
vibe with his tail, that he will break the back
his encounterer with it. *More against Atheism.*—
The doctrines of the reformation have kept the
id against all encounterers. *Atterbury.* 2. One
it loves to accost others. An old term.—

Oh, these encounterers! so gilt of tongue,
They give a coaxing welcome ere it comes;
And wide unclasp the tables of their thoughts
To every ticklish leader.

Shakspeare. Troilus and Cressida.

* To ENCOURAGE. *v. a.* [encourager, *Fr.*]
To animate; to incite to any thing.—They
array themselves in an evil matter. *Pf. l. xiv. 5.*
To give courage to; to support the spirits; to
aid; to embolden.—Kinds of musick encour-
men, and make them warlike, or make them
and effeminate. *Bacon.*—I would neither en-
courage the rebels, nor discourage the protestants
say. *K. Charles.* 3. To raise confidence; to
be confident.—I doubt not but there are ways
to found, to assist our reason in this most useful
!; and thus the judicious Hooker encourages
to say. *Locke.*

ENCOURAGEMENT. *n. f.* [from *encourage*.]
Incitement to any action or practice; incentive.
Increase of confidence.—

Such strength of heart

By conduct and example gives; nor small
encouragement, Godolphin, wife and just.

Philips.

avour; countenance; support.—

For when he dies, farewell all honour, bounty,
A generous encouragement of arts. *Osway.*
The reproach of immorality will lie heaviest
on an established religion, because those who
of no religion will profess themselves of that
which has the encouragement of the law. *Rogers.*

ENCOURAGER. *n. f.* [from *encourage*.]
One that supplies incitements to any thing; a fa-
ther.—

Live then, thou great encourager of arts,
Live ever in our thankful hearts. *Dryden.*

As the pope is a master of polite learning, and
first encourager of arts; so at Rome these arts
mediately thrive, under the encouragement of
prince. *Addison.*

ENCRATITÆ, or } in church history, here-
ENCRATITES, } tics who appeared to-
wards the end of the 2d century: They were cal-
led *Encratites*, or CONTINENTS, because they glo-

ried in abstaining from marriage and the use of
wine and animal food.

(1.) * To ENCROACH. *v. a.* [accrocher, from
erac, a hook, *Fr.*] 1. To make invasions upon
the right of another; to put a hook into another
man's possessions to draw them away.—Those
Irish captains of counties have encroached upon
the queen's freeholders and tenants. *Spenser.* 2.
To advance gradually by stealth upon that to
which one has no right: with *on* before the sub-
ject.—

This hour is mine; if for the next I care, I
grow too wide,

And do encroach upon death's side. *Herbert.*

Tisiphone, let loose from under ground,
Before her drives diseases and afflict;
And every moment rises to the fight,
Aspiring to the skies, encroaching on the light.

Dryden.

(2.) * To ENCROACH. *v. n.* 1. To creep on
gradually without right.—The superstition that
riseth voluntarily, and by degrees minglith itself
with the rites, even of every divine service, done
to the only true God, must be considered of as
a creeping and encroaching evil. *Hooker.*—

Th' encroaching ill you early should oppose;
Flatter'd, 'tis worse, and by indulgence grows.

Dryden.

2. To pass bounds.—

They fabled how the serpent, whom they
call'd

Ophion, with Eurynome, the wide

Encroaching Eve perhaps, had first the rule

Of high Olympus.

Milton.

Next, fence'd with hedges and deep ditches
round,

Exclude th' encroaching cattle from thy ground.

Dryden.

* ENCROACHER. *n. f.* [from *encroach*.] 1.
One who seizes the possession of another by gra-
dual and silent means.—

The bold encroachers on the deep,

Gain by degrees huge tracts of land,

'Till Neptune, with one general sweep,

Turns all again to barren brand.

Swift.

2. One who makes slow and gradual advances be-
yond his rights.—Full dress creates dignity, aug-
ments consciousness, and keeps at distance an en-
croacher. *Clarissa.*

* ENCROACHMENT. *n. f.* [from *encroach*.] 1.
An unlawful gathering in upon another man.
For example: if two men's grounds lie together,
the one presses too far upon the other; or if a
tenant owe two shillings rent-service to the lord,
and the lord takes three: so the Spencers encroach-
ed to themselves royal power and authority. *Coewel.*

But this usurper his encroachment proud
Stays not on man: to God his tow'r intends

Siege, and defiance.

Milton.

—If it be a man's known principle to depart from
his right, ill men will make unjust encroachments
upon him. *Atterbury.* 2. To advance into the
territories or rights of another.—As a man had a
right to all he could employ his labour upon, so
he had no temptation to labour for more than he
could make use of: this left no room for contro-
versy about the title, nor for encroachment on the
right

rights of others. *Locke*.—The ancient Romans made many *encroachments* on the sea, and laid the foundations of their palaces within the very borders of it. *Addison*.—The people, since the death of Solon, had already made great *encroachments*. *Swift*.

* *To ENCUMBER. v. a.* [*encumberer*, French.] 1. To clog; to load; to impede.—We have, by this many years experience, found that exceeding great good, not encumbered with any notable inconvenience. *Hooker*.—

Encumber'd with his vest, without defence.

Dryden.

2. To entangle; to embarrass; to obstruct.—The verbal copier is *encumbered* with so many difficulties at once, that he can never disentangle himself. *Dryden*.—

The god awak'd,

And thrice in vain he shook his wing.

Encumber'd in the silken string.

Prior.

3. To load with debts; as *his estate* is encumbered with mortgages.

* *ENCUMBRANCE. n. f.* [from *encumber*.]

1. Clog; load; impediment.—Philosophers agree in despising riches, at best, considering them as unnecessary *encumbrances* of life. *Temple*.—Dead limbs are an *encumbrance* to the body, instead of being of use to it. *Addison*. 2. Excrement; useless addition.—

Strip from the branching Alps their piny load,

The huge *encumbrance* of horridick woods.

Thomson.

3. Burden upon an estate.—In respect of the *encumbrances* of a living, consider whether it be sufficient for his family, and to maintain hospitality. *Asyliffe*.

ENCURECK, in natural history, a venomous insect found in Persia, said to be a kind of tarantula. According to Olearius, as quoted by Mr Boyle, it neither stings nor bites; but lets fall its venom like a drop of water, which causes insufferable pain in the part for a time, and afterwards so profound a sleep, that nothing can awake the patient except crushing one of the creatures on the part affected. It is said, however, that the sheep eat these insects without damage.

* *ENCYCLICAL. adj.* [*ἐγκύκλιος*.] Circular; sent round through a large region.—This council was not received in patriarchal sees, which is evident from Photius's *encyclical* epistle to the patriarch of Alexandria. *Stillingfleet*.

(1.) *ENCYCLOPÆDIA*, a term nearly synonymous with *CYCLOPÆDIA*, but preferred to it as more expressive, in denominating the present work. The late learned printer, Mr Bower, justly observes, that the preposition *EN* makes the meaning of the word more precise: For *Cyclopædia* may denote "the instruction of a circle," as *Cyropædia* is "the instruction of Cyrus," whereas in *Encyclopædia* the preposition determines the word to be from the dative *cyclus*, "instruction in a circle." And Vossius in his book *De Vitiis Sermonis*, has observed, "That *Cyclopædia* is used by some authors, but *Encyclopædia* by the best." Avicenna, the celebrated Arabian physician appears to have had the merit of being the first who compiled an *Encyclopædia*. See *AVICENNA*.

(2.) * *ENCYCLOPEDIA. ENCYCLOPÆDIA. n. f.* [*ἐγκυκλοπαιδία*.] The circle of sciences; the round of learning.—In this *encyclopædia* and round of knowledge, like the great wheels of heaven, we must observe two circles, that while we are daily carried about, and whirled on by the swing and rapt of the one, we may maintain a natural and proper course in the sober wheel of the other. *Brown*.—Every science borrows from all the rest, and we cannot attain any single one without the *encyclopædy*. *Glanville*.—This art may justly claim a place in the *encyclopædia*, especially such as is used for a model of education for an able politician. *Arbutnot*.

ENCYCLOPEDIIST, or ENCYCLOPÆDIST. n. f. A compiler of a dictionary of arts and sciences, or, the author of a series of articles, or branches of science, in an *Encyclopædia*.

* *ENCYSTED. adj.* [*ἐνυστός*.] Enclosed in a vessel or bag.—*Encysted* tumours borrowed their names from a cyst or bag in which they are contained. *Sharp*.

* *END. n. f.* [*end*, Saxon.] 1. The extremity of the length of any thing materially extended. Of bodies that have equal dimensions we do not use *end*: the extremity of breadth is *side*.—He than put forth the *end* of the rod that was in hand, and dipt it in a honeycomb. 1 *Sam*.—Extremity or last part in general.—The extremities and bounds of all bodies we have no difficulty arrive at; but, when the mind is there, it is nothing to hinder its progress into this endless expansion: of that it can neither find, nor count any *end*. *Locke*. 3. The last particle of any assignable duration.—Behold the day growth is *end*. *Judges*.—At the *end* of two months he turned. *Judges*.—

If the world's age and death be argu'd we
By the sun's fall, which now tow'rd's
doth bend,

Then we might fear, that virtue, since
fell

So low as woman, should be near her *end*.

Dan

4. The conclusion or cessation of any action. Jacob had made an *end* of commanding his *Gen*.—

Yet vainly most their age in study spend;
No *end* of writing books, and to no *end*.

Dan

—The causes and designs of an action are the beginning: the effects of these causes, and the difficulties met with in the execution of these signs, are the middle; and the unravelling of resolutions of these difficulties, are the *end*. *Br*. of *Epic Poetry*. 5. When *end* is not used materially, it is opposed to *beginning*.—Better is the than the *beginning* therefore. *Eccles*. 6. The conclusion or last part of any thing; as, the *end* of a chapter; the *end* of a discourse. 7. Ultimate final doom.—Mark the perfect man, and behold the upright, for the *end* or that man is peace.

8. The point beyond which no profession can be made.—They reel to and fro, and stagger like a drunken man, and are at their wits *end*. *Pf*. 27. 9. Final determination; conclusion of debate or deliberation.—My guilt be on my head.

and there's an *end*. *Shakefp.* 10. Death; fate; de-
cease.—I determine to write the life and the *end*,
the nature and fortunes of George Villiers. *Wott.*

The soul receives intelligence,
By her near genius, of the body's *end*,
And so imparts a sadness to the sense.
Daniel's Civil War.

—'Tis the great business of life to fit ourselves for
our *end*. *L'Estrange.*

Remember Milo's *end*,
Wedg'd in that timber which he strove to rend.
Roscommon.

My God, my father and my friend,
Do not forsake me in my *end*. *Roscommon.*
Unblam'd thro' life, lamented in thy *end*.
Pope.

1. Cessation; period.—What is the sign of the
end of the world? *Matthew.*—Great houses shall
be an *end*. *Amos.* 12. Limit; termination.—
There is no *end* of the store. *Nabum.* 13. Abso-
lution; total loss.—There would be an *end* of all
evil government, if the assignment of civil power
were by such institution. *Locke.* 14. Cause of
ruin; destroyer.—

Take heed you dally not before your king,
Left he that is the supreme King of kings,
Confound your hidden falsehood, and award
Either of you to the other's *end*. *Shakefp.*
Consequence; conclusive event; conclusion.—

O, that a man might know
The *end* of this day's business ere it come!
But it sufficeth that the day will *end*. *Shakefp.*
The *end* of these things is death. *Rom. vi. 21.*
Fragment; broken pieces.—

Thus I clothe my naked villainy
With odd odd *ends*, stol'n forth of Holy Writ,
And seem a saint. *Shakefp.*

Purpose; intention.—There was a purpose
to reduce the monarchy to a republic, which
is far from the *end* and purpose of that nation.
Wendon.

I have lov'd!
What can thy *ends*, malicious beauty, be?
Can be who kill'd thy brother, live for thee?
Dryden.

Heav'n, as its instrument, my courage sends;
Heav'n ne'er sent those who fight for private
ends. *Dryden.*

Others are apt to attribute them to some false
intention. *Addison.* 18. Thing intended;
design; the termination of intellectual pro-
fession.—Wisdom may have framed one and the
me thing to serve commodiously for divers *ends*,
and of those *ends* any one may be sufficient cause
of continuance, though the rest have ceased.
Locke.—All those things which are done by him,
for some *end* for which they are done; and the
if for which they are done, is a reason of his
to do them. *Hooker.*

Her only *end* is never-ending bliss;
Which is, the eternal face of God to see,
Who last of *ends*, and first of causes is;
And to do this, the most eternal be. *Davies.*
The *end* of the commandment is charity. 1 *Tim.*
Two things I shall propound to you, as *ends*;
the wife men of this world have made them
is. *Suckling.*—Such conditions did fully com-
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ply with all those *ends*, for which the parliament
had first taken up arms. *Garendon.*

Hear and mark
To what *end* I have brought thee hither. *Milt.*
Life, with my Indamora, I would chuse;
But, losing her, the *end* of living lose. *Dryden*
For when success a lover's toil attends,
Few ask if fraud or force attain'd his *ends*.
Pope.

—The *end* of our fast is to please God, and make
him propitious. *Smalridge.* 19. An *END*. [Proba-
bly corrupted from *on end*] Upright; erect; as,
his hair stands *an end*, 20. An *END* has a significa-
tion in low language not easily explained; as, *most*
an end, commonly; perhaps it is properly *on end*,
at the conclusion; or corrupted for some old
word not easily recoverable.—

Stay'st thou to vex me here?
Slave, that, still *an end*, turns me to shame!
Shakefp.

(1.) * To *END*. *v. a.* [from the noun.] 1. To
terminate; to conclude; to finish.—They have
ended all my harvest. *Ruth.*—He would in one bat-
tle *end* quarrel with them, either win or lose the
empire. *Knolles's Hist. of the Turks.*—That expen-
sive war under which we have so long groaned, is
not yet *ended*. *Smalridge.* 2. To destroy; to put
to death.—

The lord of Stafford dear to day hath bought
Thy likeness; for instead of thee, King Harry,
This sword hath *ended* him. *Shakefp. Henry IV.*
(2.) * To *END*. *v. n.* 1. To come to an end; to
be finished.—

Then ease your weary Trojans will attend,
And the long labours of your voyage *end*.
Dryden's Æneid.

2. To die. [*τελευτάω*].—
Yet happy were my death, mine *ending* blest,
If this I could obtain, that, breast to breast,
Thy bosom might receive my yielded spirit.
Fairfax.

3. To terminate; to conclude.—Our laughing, if
it be loud and high, commonly *ends* in a deep
sigh; and all the instances of pleasure have a sting
in the tail. *Taylor's Rule of Living Holy.* 4. To
cease; to fail.—His sovereignty, built upon either
of these titles, could not have descended to his
heir, but must have *ended* with him. *Locke.* 5. To
conclude action or discourse.—

The angel *ended*, and in Adam's ear
So charming left his voice. *Milton.*
* To *ENDAMAGE*. *v. a.* [from *damage*.] To
mischief; to prejudice; to harm.—

Nor ought he car'd whom he *endamaged*
By tortuous wrong, or whom bereav'd of right.
Spenser's Fairy Queen.
—It cometh sometime to pass, that a thing un-
necessary in itself doth notwithstanding appear con-
venient to be still held, even without use, left, by
reason of that coherence which it hath with some-
what most necessary, the removal of the one should
endamage the other. *Hooker.*

Where your good word cannot advantage him,
Your slander never can *endamage* him. *Shakefp.*
Gather our soldiers, scatter'd and dispers'd,
And lay new platforms to *endamage* them.
Shakefp. Henry VI.

The trial hath *endamage'd* thee no way ;
Rather more honour left, and more esteem. *Milt.*
—When an erroneous opinion is published, the publick is *endamaged*, and therefore it becomes punishable by the magistrate. *Soutb.*—A great alteration doth seldom any wife *endamage* or disorder the globe. *Woodward's Natural History.*

* *ENDAMAGEMENT. n. f.* [from *endamage*.]
Damage ; loss.—

These flags of France that are advanced here,
Have hither march'd to the *endamagement*. *Shak.*
* *To ENDANGER. v. a.* [from *danger*.] 1. To put into hazard ; to bring into peril.—Every one desires his own preservation and happiness, and therefore hath a natural dread of every thing that can destroy his being, or *endanger* his happiness. *Tillotson.*

He rais'd the rest,
To force the foes from the Latinian shore,
And Italy's *endanger'd* peace restore. *Dryd. Æn.*
My kingdom claims your birth ; my late defence,

Of our *endanger'd* fleet, may claim your confidence. *Dryden.*

—Volatile salts never exist in an animal body ; the heat required to make them volatile, *endangers* the animal. *Arbuthn.*—The interest *endangered* is our title to heaven. *Rogers.* 2. To incur the danger ; to hazard.—He that turneth the humours back, and maketh the wound bleed inwards, *endangereth* malign ulcers. *Bacon.*

* *To ENDEAR. v. a.* [from *dear*.] To make dear ; to make beloved.—All those instances of charity which usually *endear* each other, sweetness of conversation, frequent admonition, all significations of love must be expressed towards children. *Taylor.*—

And in the mixture of all these appears
Variety, which all the rest *endears*. *Danham.*
—The only thing that can *endear* religion to your practice, will be to raise your affections above this world. *Waker.*

* *ENDEARMENT. n. f.* [from *endear*.] 1. The cause of love ; means by which any thing is *endeared*.—

Her first *endearments*, twining round the soul.
Thomson.

2. The state of being endeared ; the state of being loved.—Is not the separate property of a thing the great cause of its *endearment* amongst all mankind ? *Soutb.*—When a man shall have done all that he can to make one his friend, and emptied his purse to create *endearment* between them, he may, in the end, be forced to write vanity and frustration. *South.*

(1.) * *ENDEAVOUR. n. f.* [*dévoir*, Fr. *endevoir*.]
Labour directed to some certain end ; effort to obtain or avoid.—

My studied purposes went
Beyond all man's *endeavours*. *Shak. Henry VIII.*
Heav'n doth divide

The state of man in divers functions,
Setting *endeavour* in continual motion. *Shakesp.*
Here their appointment we may best discover,
And look on their *endeavour*. *Shak. Ant. & Cleop.*

—I take imitation of an author to be an *endeavour* of a later poet to write like one who has written before him on the same subject. *Dryd.*—The bold

and sufficient pursue their game with more passion, *endeavour*, and application, and therefore often succeed. *Temple.*—She could not make the least *endeavour* towards the producing of any thing that hath vital and organical parts. *Ray.*—Such an assurance as will quicken men's *endeavours* for the obtaining of a lesser good, ought to animate men more powerfully in the pursuit of that which is infinitely greater. *Tillotson.*—This is the hinge on which turns the liberty of intellectual beings, in their constant *endeavours* after, and steady prosecution of, true felicity. *Locke.*

(2.) *ENDEAVOUR RIVER*, a river on the NE. coast of New Holland, with a bar at its mouth, and not depth of water for vessels to sail more than a mile above the bar. Lon. 145. 12. E. Lat. 25. 26. S.

(3.) *ENDEAVOUR STRAIT*, a narrow sea, between New Guinea and New Holland. See COOK, N° III, § 7. and GUINEA, NEW. Lon. 118. 36. W. Lat. 10. 39. S.

(1.) * *To ENDEAVOUR. v. a.* [from the noun.] To attempt ; to essay.—

To pray'r, repentance, and obedience due,
Though but *endeavour'd* with sincere intent,
Mine ear shall not be slow, mine ear not shut. *Milton.*

(2.) * *To ENDEAVOUR. v. n.* To labour to a certain purpose ; to work for a certain end. It has commonly *after* before the thing.—I could wish that more of our country clergy would *endeavour after* a handsome elocution. *Addison's Spectator.*

Of old, those met rewards who could excel
And those were prais'd, who but *endeavour'd* well. *Pope.*

* *ENDEAVOURER. n. f.* [from *endeavour*.]
One who labours to a certain end.—He appears an humble *endeavourer*, and speaks honestly to a purpose. *Rymer's Tragedies of the last Age.*

* *ENDECAGON. n. f.* [*ἐνδεκάγων*.] A plain of eleven sides and angles.

ENDEIXIS, [*ἐνδεξις*, Gr.] in medicine, an indication of the method of cure.

ENDELAVE, a small island of Denmark, miles N. of Funen.

ENDELLION, a town E. of Padstow, Cornwall.

* *ENDEMICAL. adj.* [*ἐνδημικός*.] Peculiar to

* *ENDEMIC*. } country ; used of any disease proceeding from the

* *ENDEMICK. } cause peculiar to the country where it respects such as the scurvy to the northern climes. *Querc.**

—We may bring a consumption under the name of a pandemic, or *endemick*, or rather a venereal disease, to England. *Harvey on Consumption.*

—Solenander, from the frequency of the plague springing up in any region, could gather what *endemic* diseases the inhabitants were subject to. *Ray on the Creation.*

—An *endemic* disease is what is common to the people of the country. *Arbuthn. on Air.*

—What demonstrates the plague to be *endemic* to Egypt, is its invasion and going of at certain seasons. *Arbuthnot.*

ENDENA, a town of the Cisalpine republic in the department of the Serio, and ci devant province of Bergamasco ; 7 miles N. of Bergamo.

* *To ENDENIZE. v. a.* [from *denizen*.] To make free ; to enfranchise.—The English tongue hath been beautified and enriched out of other tongues.

tongues, by enfranchising and *endenizing* strange words. *Camden*.

(1.) ENDER, a town of the Cisalpine republic, in the depart. of Serio, 12 miles NE. of Bergamo.

(2.) ENDER, a river of Scotland, formed by the union of several small brooks, which runs into the Garry, 7 miles W. of Blair in Athol, Perthshire.

ENDERBY, a village SW. of Leicester, seated on the river Stour.

ENDERSBURY, a town in Dorsetshire.

ENDERSDORF, the name of two towns of Silesia, in the principality of Neysze; the one $3\frac{1}{2}$ miles SW. of Grotkau; the other as far from Ziegenhals.

ENDIAN, a town of Persia, in the province of Chulistan, 150 miles SSE. of Susa.

* To ENDICT. See To ENDITE.

* ENDICTMENT. See ENDITEMENT.

ENDING, or } a town of Germany, in Bris-
ENDINGEN, } gaw, seated on the Rhine, 7
miles NW. of Friburg, and 10 below Brischat.

(1.) * To ENDITE. To ENDICT. *v. a.* [*enditer*, *v. dictum*, Lat.] 1. To charge any man by a writ of accusation before a court of justice: as, *he was endited for felony*. It is often written *indict*. To draw up; to compose; to write.—

How shall Filbert unto me *indite*,

When neither I can read nor he can write. *Gay*.

Hear how learn'd Greece her useful rules *in-*
dicts,

When to repress, and when indulge our fights! *Pope*.

(2.) * To ENDITE. *v. n.* To compose —

Your battles they hereafter shall *indite*.

And draw the image of our Mars in fight. *Waller*.

* ENDITEMENT. ENDICTMENT. *n. f.* [from *dicere*] A bill or declaration made in form of law, & the benefit of the commonwealth; or an accusation for some offence exhibited unto jurors, & by their verdict found to be true, before an *assize* can have power to punish the same offence.

Wel.—'Tis necessary that the species of the *me* be described in the libel or articles, which 7 English lawyers call an *enditement* or information. *Ayliffe's Parergon*.—We never draw any *enditement* at all against them, but think commendably even of them. *Hooker*.—The hand-writing against him may be cancelled in the court of *hears*, and yet the *enditement* run on in the court of *science*. *South*.—

Attend the court, and thou shalt briefly find
In that one place the manners of mankind;

Hear the *enditements*, then return again,

Call thyself wretch, and, if thou dar'st, com-
plain. *Dryden*.

(1.) * ENDIVE. *n. f.* [*endive*, Fr. *intybum*, Lat.] plant.—*Endive*, or succory, is of several sorts; the white, the green, and the curled. *Mortimer's Husbandry*.

(2.) ENDIVE, or SUCCORY. See CICHORIUM.

ENDIVIA. See CICHORIUM, N° 1.

ENDKIOPING, a small town of Sweden, in the province of Upland, near an inlet of lake *Mejer*, 40 miles W. of Stockholm. The houses are mostly of wood, painted red. Lon. 16. 59. E. *cl. 52. 45. N.*

* ENDLESS. *adj.* [from *end*.] 1. Having no end; being without conclusion or termination.—

Nothing was more *endless* than the common method of comparing eminent writers by an opposition of particular passages in them. *Pope's Preface to the Iliad*. 2. Infinite in longitudinal extent.—As it is pleasant to the eye to have an *endless* prospect, so it is some pleasure to a finite understanding to view unlimited excellencies. *Tillotson*. 3. Infinite in duration; perpetual.—None of the heathens, how curious soever in searching out all kinds of outward ceremonies, could ever once endeavour to resemble herein the church's care for the *endless* good of her children. *Hooker*.—

But after labours long, and sad delay,
Brings them to joyous rest, and *endless* bliss.

Spenser.

All our glory extinct, and happy state,
Here swallow'd up in *endless* misery! *Milton*.

4. Incessant; continual.—

All the priests and friars in my realm,
Shall in procession sing her *endless* praise. *Shak*.
Each pleasing Blount shall *endless* smiles be-
stow,

And soft Belinda's blush for ever glow. *Pope*.

* ENDLESSLY. *adv.* [from *endless*.] 1. Incessantly; perpetually.—Though God's promise has made a sure entail of grace to all those who humbly seek, yet it no where engages that it shall importunately and *endlessly* renew its assaults on those who have often repulsed it. *Decay of Piety*. 2. Without termination of length.

* ENDLESSNESS. *n. f.* [from *endless*.] 1. Extension without limit. 2. Perpetuity; *endless* duration. 3. The quality of being round without an end.—

The Tropick circles have,

Yea, and those small ones, which the poles en-
grave,

All the same roundness, evenness, and all
The *endlessness* of the Equinoctial. *Donne*.

ENDLESS SCREW. See SCREW.

* ENDLONG. *adv.* [*end* and *long*.] In a strait line.—

Then spurring at full speed, ran *endlong* on,
Where Theseus sat on his imperial throne. *Dryd*.

* ENDMOST. *adj.* [*end* and *most*.] Remotest; furthest; at the farther end. *Diſc*.

ENDOR, in ancient geography, a town of Galilee, 4 miles S. of mount Tabor, in the land of Manasseh, where the witch was consulted by Saul. *Jérôme* says it was a large village, in his time.

ENDORSE, in heraldry, an ordinary, containing the 8th part of a pale, which Leigh says is only used when a pale is between two of them.

* To ENDORSE. *v. a.* [*endorser*, Fr. *dorsum*, Lat.] 1. To register on the back of a writing; to superscribe.—A French gentleman speaking with an English of the law *salique*, the English said that was meant of the women themselves, not of males claiming by women. The French gentleman said, Where do you find that gloss? The English answered, Look on the back side of the record of the law *salique*, and there you shall find it *endorsed*. *Bacon's Apophthegms*.—Upon credential letters was *endorsed* this superscription. To the king who hath the sun for his helmet. *Howel*.—All the letters I can find of yours I have fastened in a folio cover, and the rest in bundles *endorsed*. *Swift* to *Pope*. 2. To cover on the back. This is not used.

D d d 2

Charloet,

Chariots, or elephants *endored* with tow'rs
Of archers. *Milton's Paradise Regained.*

ENDORSED, or ANOSSEE. See ANOSSEE.

(1.) * ENDORSEMENT. *n. f.* [from *endorse*.]

1. Supercription; writing on the back. 2. Ratification.—

Th' *endorsement* of supreme delight,

Writ by a friend, and with his blood, *Herbert.*

(2.) ENDORSEMENT. See INDORSEMENT.

* To ENDOW. *v. a.* [*indotare*, Lat. *endouairer*, Fr.] 1. To enrich with a portion.—He shall surely *endow* her to be his wife. *Exodus.* 2. To supply with any external goods.—An alms house: I intend to *endow* very handsomely for a dozen superannuated husbandmen, *Addison's Spect.* 3. To enrich with any excellence.—

I at first with two fair gifts

Created him *endow'd*; with happiness

And immortality; that fondly lost,

This other serv'd but to eternize woe. *Milton.*

—Among those who are the most richly *endowed* by nature, and accomplished by their own industry, how few are there whose virtues are not obscured? *Addison.*—God did never command us to believe, nor his ministers to preach, any doctrine contrary to the reason he hath pleased to *endow* us with. *Swift.* 4. To be the fortune of any one.

I do not think

So fair an outward, and such stuff within,

Endows a man but him. *Shakesp. Cymbeline.*

* ENDOWMENT. *n. f.* [from *endow*.] 1.

Wealth bestowed to any person or use. 2. The bestowing or assuring a dowry; the setting forth or severing a sufficient portion for a vicar towards his perpetual maintenance, when the benefice is appropriated. *Cowell.* 3. Appropriation of revenue.

A chapel will I build; with large *endowment*.

Dryden.

4. Gifts of nature. In this sense it is commonly plural.—By a desire of fame, great *endowments* are not suffered to lie idle and useless to the publick. *Addison.*—If providence shews itself even in the blemishes of these creatures, how much more does it discover itself in their several *endowments*, according to the condition in which they are posited? *Addison.*

ENDSCHUTZ, a town of Germany, in the circle of Upper Saxony, and district of Neustadt, 4 miles ENE. of Weyda.

* To ENDUE. *v. a.* [*indue*, Lat.] 1. To supply with mental excellencies; to invest with intellectual powers.—*Endue* them with thy holy Spirit. *Common Prayer.*—Wisdom was Adam's instructor in Paradise; wisdom *endued* the fathers, who lived before the law, with the knowledge of holy things. *Hecker.*

These banish'd men that I have kept withal,
Are men *endued* with worthy qualities. *Shakesp.*

With what ease,

Endued with royal virtues as thou art,

Might'st thou expel this monster from his throne?

Milton.

—Whatsoever other knowledge a man may be *endowed* withal, he is but an ignorant person who doth not know God, the author of his being. *Tillotson.*—Every Christian is *endued* with a power, whereby he is enabled to resist and conquer temptations. *Tillotson.* 2. In the following passage it

seems incorrecly printed for *endow*.—*Leah* said,
God hath *endured* me with a good dowry. *Genesis.*

* ENDURANCE. *n. f.* [from *endure*.] 1. Continuance; lastingness.—Some of them are of very great antiquity and continuance, others more late and of less *endurance*. *Spenser's Ireland.* 2. Patience; sufferance.—

Great things of small

One can create; and in what place so'er

Thrive under evil, and work ease out of pain,

Through labour and *endurance*. *Milton.*

—Their fortitude was most admirable in their presence and *endurance* of all evils, of pain, and of death. *Temple.* 3. State of suffering.—I would fain know whether that man takes a rational course to preserve himself, who refuses the *endurance* of these higher troubles, to secure himself from a condition infinitely more miserable? *South.*

4. Delay; procrastination. Obsolete.—

I should have ta'ep some pains to bring together

Yourself and your accusers, and have heard you
Without *endurance* further. *Shakesp. Henry VIII.*

(1.) * To ENDURE. *v. a.* [*endurer*, Fr. *durare*, Lat.] 1. To bear; to sustain; to support unbroke.—The hardness of bodies is caused chiefly by the jejuneness of the spirits, and their impurity with the tangible parts, which make them not only hard, but fragile, and less *enduring* of pressure. *Bacon's Natural History.*

Both were of shining steel, and wrought to pure,

As might the strokes of two such arms *endure*.

Dryden.

2. To bear with: patience.—

So dear I love him, that with him all death

I could *endure*; without him, live no life. *Milton.*

—The gout haunts usually the easy and the rich, the nice and the lazy, who grow to *endure* much, because they can *endure* little. *Temple.*

By thine own tongue thou art condemn'd,
and must

Endure our law. *Shakesp. Cymbeline.*

—Taking into the city all such things as they thought needful for the *enduring* of the siege, they destroyed all the rest. *Knox's Hist.* 3. To undergo; to sustain.—

I wish to die, yet dare not death *endure*.

Dryden's Aureng.

4. To continue in. Not used.—The deer *endured* the womb but eight months, and is complete 2 six years. *Brown's Vulgar Errors.*

(2.) * To ENDURE. *v. n.* 1. To last; to remain; to continue.—Labour not for the meat which perissheth, but for that meat which *endureth* unto everlasting life. *John.*—Doth the crown *endure* to every generation? *Proverbs.*—By being able to repeat measures of time, or ideas of stated length of duration in our minds, we can imagine duration, where nothing does really *endure* or exist. *Locke.*

A charm that shall to age *endure*

The mind beevoleant and pure. *Ass.*

2. To brook; to bear; to admit.—For how can I *endure* to see the evil that shall come unto my people? Or how can I *endure* to see the destruction of my kindred? *Esaias* viii. 6.—Our great English lords could not *endure* that any kings should reign in Ireland but themselves; nay, they

could

could hardly endure that the crown of England should have any power over them. *Davies on Ireland.*

* **ENDURER.** *n. f.* [from *endure*.] 1. One that can bear or endure; sustainer; sufferer.—They are very valiant and hardy; for the most part great sufferers of cold, labour, hunger, and all hardships. *Spenser*. 2. Continuer; laster.

* **ENDWISE.** *adv.* [end and wise.] Erectly; uprightly; on end.—A rude and unpolished America, supplied with slothful and naked Indians, living in wretched huts and cabbins, made of poles set endwise. *Ray on the Creation*

ENDYMION, in fabulous history, a shepherd, son of Athlius and Calyce. It is said that he received of Jupiter to grant to him to be always young, and to sleep as much as he would; whence came the proverb of *Endymionis somnum dormire*, express a long sleep. Diana saw him naked as asleep; on mount Latmos; and was so struck with his beauty, that she came down from heaven every night to enjoy his company. Endymion married Chromia daughter of Itonus; by whom he had three sons Pezon, Epeus, and Aeolus, and a daughter called *Barydice*. The fable of Endymion's amours with Diana, or the moon, arose from the knowledge of astronomy; and as he passed the night on some high mountain to observe the heavenly bodies, it came to be reported that he was married by the moon. Some suppose that there are two of that name; the son of a king of Elis, and the shepherd or astronomer of Caria. The temple of Heracles maintained that Endymion died on mount Latmos, and the Eleans pretended to show his tomb at Olympia in Peloponnesus.

* **TO ENECATE.** *v. a.* [eneco, Latin.] To kill; to destroy.—Some plagues partake of such a pernicious degree of malignity, that, in the manner of a most presentaneous poison, they enecate in ten or three hours, suddenly corrupting or extinguishing the vital spirits. *Harvey on the Plague*. **ENEDA**, a town of the Helvetic republic, in the canton of Glaris, a mile E. of Glaris. **ENEDOR**, a town NE. of St. Michael, Cornwall. * **ENEMY.** *n. f.* [ennemi, Fr. inimicus, Latin.] A public foe.—All these statutes speak of English rebels and Irish enemies, as if the Irish had never been in condition of subjects, but always out of the protection of the law. *Davies on Ireland*.—He enemy thinks of raising three-score thousand men for the next summer. *Addison on the War*. A private opponent; an antagonist.—I say unto you, love your enemies. *Matt.* 3. Any one who wars another with malevolence; not a friend.—

Kent, in disguise, Follow'd his enemy king, and did him service Improper for a slave. *Shakspeare, King Lear*. One that dislikes.—He that designedly uses amiguities, ought to be looked on as an enemy to truth and knowledge. *Locke*.—

Bold is the crick, who dares prove These heroes were no friends to love; And bolder he who dares aver, That they were enemies to war. *Prior*. [In theology.] The fiend; the devil.—Defend us from the danger of the enemy. *Comm. Prayer*. * **ENERGETICK.** *adj.* [energeticus.] 1. forcible; sure; vigorous; powerful in effect; efficacious.—These miasms entering the body, are not so ener-

getick as to venenate the entire mass of blood in an instant. *Harvey*. 2. Operative; active; working; not at rest.—If then we will conceive of God truly, as far as we can, adequately, we must look upon him not only as an eternal Being, but also as a Being eternally energetick. *Grew*.

ENERGUMENS, in church history, persons supposed to be possessed by the devil, concerning whom there were many regulations among the primitive Christians. They were denied baptism and the eucharist, in some churches; but though they were under the care of exorcists, they were allowed the public prayers of the church, and were permitted to be present. See **EXORCISM**.

* **ENERGY.** *n. f.* [ενεργια.] 1. Power not exerted in action.—They are not effective of any thing, nor leave no work behind them, but are energies merely; for their working upon mirrors, and places of echo, doth not alter any thing in those bodies. *Bacon*. 2. Force; vigour; efficacy; influence.—

Whether with particles of heav'nly fire

The God of nature did his soul inspire;

Or earth, but new divided from the sky,

And pliant still, retain'd th' ethereal energy.

Dryden.

—God thinketh with operation infinitely perfect, with an omnipotent as well as an eternal energy. *Grew*.—Beg the blessed Jesus to give an energy to your imperfect prayers, by his most powerful intercession. *Smalridge*.—

What but God!

Inspiring God! who, boundless spirit all,

And unremitting energy, pervades,

Adjusts, sustains, and agitates the whole. *Thomson*. 3. Faculty; operation.—Matter, though divided into the subtillest parts, moved swiftly, is senseless and stupid, and makes no approach to vital energy. *Ray on the Creation*.—How can concussion of atoms beget self-consciousness, and powers and energies that we feel in our minds? *Bentley*. 4. Strength of expression; force of signification; spirit; life.

Who did ever, in French authors, see

The comprehensive English energy? *Roscomm*.

—Swift and ready, and familiar communication is made by speech; and, when animated by elocution, it acquires a greater life and energy, ravishing and captivating the hearers. *Holder*.—Many words deserve to be thrown out of our language, and not a few antiquated to be restored, on account of their energy and sound. *Swift*.

* **TO ENERVATE.** *v. a.* [enervus, Latin.] To weaken; to deprive of force; to emasculate.—Great empires, while they stand, do enervate and destroy the forces of the natives which they have subdued, resting upon their own protecting forces. *Bacon*.—Sheepish softness often enervates those who are bred like fondlings at home. *Locke*.—

On each enervate string they taught the note,
To pant, or tremble through an eunuch's throat.

Pope.

—Footmen exercise themselves, whilst their enervated lords are softly lolling in their chariots. *Arbutnot and Pope*.

(1.) * **ENERVATION.** *n. f.* [from *enervus*.] 1. The act of weakening; emasculation. 2. The state of being weakened; effeminacy.

(2.) **ENERVATION** is the act of destroying the force,

force, use, or office, of the nerves, either by cutting them, by weakening them with debauchery, or by some other violence. Excess of wine, and other strong, hot, spirituous liquors, enervate, or weaken the nerves. Too great abstinence has the same effect. A moderate use of these and other stimuli strengthen them.

* To ENERVE. *v. a.* [*eneruo*, Lat.] To weaken; to break the force of; to crush.—We shall be able to solve and *enerve* their force. *Digby*—

Such object hath the pow'r to soft'n and tame
Severest temper, smooth the rugged'st brow,
Enerve, and with voluptuous hope dissolve.

Milton.

ENEWOOD, two villages in Durham.

* To ENFAMISH. *v. a.* [from *famish*.] To starve; to famish; to kill with hunger. *Dick.*

ENFANS PERDUS, the same with forlorn hope. See FORLORN.

* To ENFEBLE. *v. a.* [from *feble*.] To weaken; to enervate; to deprive of strength.—

I've belied a lady,

The princeps of this country; and the air 'on't
Revengeingly *enfebles* me. *Shakef. Cymbeline.*

My people are with sickness much *enfebled*.

Shakef.

Much hath hell debas'd, and pain

Enfebled me, to what I was in heav'n! *Milton.*

—Some employ their time in affairs below the dignity of their persons; and being called by God, or the republick, to bear great burdens, do *enfeble* their understandings by fardid and brutish business. *Taylor's Rule of Living Holy.*—

Sure, nature form'd me of her softest mold,

Enfebled all my soul with tender passions,

And sunk me even below my own weak sex.

Addison's Cato.

* To ENFEOFF. *v. a.* [*feoffamentum*, low Latin.] To invest with any dignities or possessions. A law term.—If the eldest son *enfesoff* the second; reserving homage, and that homage paid, and then the second son dies without issue, it will descend to the eldest as heir, and the seignory is extinct. *Hall's Common Law of England.*

* ENFEOFFMENT. *n. s.* [from *enfesoff*.] 1. The act of *enfesoffing*. 2. The instrument or deed by which one is invested with possessions.

* To ENFETTER. *v. a.* [from *fetter*.] To bind in fetters; to enchain. Not in use.—

His soul is so *enfetter'd* to her love,

That she may make, unmake, do what she like.

Shakef.

(1.) ENFIELD, a town in Middlesex, 12 miles N. of London. It had an extensive royal chase, which was disforested by act of parliament in 1779.

(2.) ENFIELD, a village in Hampshire.

(3.) ENFIELD, in Surry, SW. of Egham.

(4.) ENFIELD, a township of Connecticut, in Hartford county, on the E. bank of the Connecticut.

(5.) ENFIELD, a town in the above township, 3 miles N. of King's Ferry, and 17 N. of Hartford. Lon. 2. 7. E. of Philadelphia. Lat. 41. 56. N.

(6.) ENFIELD, a township of New Hampshire, in Grafton county, 11 miles SE. of Dartmouth College. It had 724 citizens in 1790; chiefly farmers.

(1.) * ENFILADE. *n. f.* [Fr.] A frail page; any thing through which a right line may be drawn. Military term.

(2.) ENFILADE, in the art of war, is used in speaking of trenches, or other places, which may be scoured by the enemy's shot along their whole length. In conducting the approaches at a siege, care must be taken that the trenches be not enfiladed from any work of the place.

* To ENFILADE. *v. a.* [from the noun.] To pierce in a right line.—The avenues, being cut through the wood in right lines, were *enfiladed* by the Spanish cannon. *Expedition to Carthagena.*

ENFINEZ, formerly ANTINOE; a city of Egypt, built by Adrian in honour of his infant favourite Antinous. See ANTINOUS, No 1. It is situated towards the middle of Upper Egypt, and still contains several stately monuments of antiquity. This city was anciently very magnificent. It was about half a league in circumference, having two principal streets 45 feet wide intersecting each other at right angles, and running through its whole length. The others were more narrow, but equally straight; the two largest having gates at each end, part of which remain. According to the Nubian geographer, it was called the *City of the Magi*, because Pharaoh is said to have caused the magicians come thence to his court. Near it were the ruins of Abydos, where there was an oracle of the goddess Belsa, one of the most ancient in Egypt, and which was still famous in the time of Constantine. The ruins of the gates are the most beautiful piece of architecture to be met with in this place. The handsomest has three vaulted entries; the middle one being 40 feet high, 22 wide, and 30 thick, the other two smaller. Each of the facades of this edifice is ornamented with 4 pilasters in relief, with Corinthian capitals, the acanthus leaves of which have a considerable projection. It was surrounded by 8 Corinthian columns, of which only one now remains, but the pedestals the rest are still entire. Besides these, there are heaps of rubbish in different parts of the town, apparently the remains of ancient temples or palaces. All these seem to have been bordered by a colonnade, forming a portico on each side, where the inhabitants might walk secure from the heat of the sun. One of the squares was ornamented with 4 large Corinthian pillars, 3 of which are destroyed all but the bases. The 4th is quite entire, about 50 feet high, and the shaft composed of several stones. The pedestal has a Greek inscription; pretty much defaced, dedicating it to the emperor Alexander Severus, to whom the senate of ALEXANDRIA had already dedicated the famous column mentioned under that article. These 4 other columns were therefore probably raised in honour of that emperor after his victories over the Persians; for the foliage of the column with which the first stone of the shaft is decorated, was a sign of victory among the Romans. Towards the end of the 4th century the city was peopled by Christians; and Palladius assures us that there were at that place 12 convents of nuns, and several others inhabited by monks. In the environs there are still several coptic monasteries possessed by monks equally miserable and ignorant.

morant. The Nubian Geographer informs us, that the city was surrounded by a well cultivated country, abounding in fruits and harvests; but we have now given place to sands and barren parts. The ruins of Abydos above mentioned still to be seen near this place. See *ABYDOS*, p. 3.

* **TO ENFIRE.** *v. a.* [from *fire*.] To fire; to set on fire; to kindle. Obsolete.—

So hard those heavenly beauties be *enfir'd*,
As things divine, left passions do impreſs.

Spenser.

* **ENFORCE.** *n. f.* [from *force*.] Power; strength; not used.—

He now defies thee thrice to single fight,
As a petty enterprize of small *enforce*. *Milſton.*

(1.) * **TO ENFORCE.** *v. a.* [*enforcer*, French.] 1. To give strength to; to strengthen; to invigorate. To make or gain by force.—

The idle ſtroke, *enforcing* furious ways,
Miſſing the mark of his miſaimed light,
Did fall to ground. *Fairy Queen.*

Sometimes with lunatic bane, ſometimes with
prayer's

Enforce their charity... *Shakeſp. K. Lear.*
To put in act by violence —

Sker away as ſwift as ſtones
Enforced from the old Aſſyrian ſlings.

Shakeſp. Henry V.

To inſtigat; to provoke; to urge on; to animate.—

Fear gave her wigs, and rage *enforce'd* my
right

through woods and plains. *Fairy Queen.*

If you knew to whom you ſlew this honour,
know you would be prouder of the work,
than cuſtomy bounty can *enforce* you. *Shakeſp.*

To urge with energy.—

All revoke

your ignorant election; *enforce* his pride,
and his old hate to you. *Shakeſp. Coriolanus.*

le prevailed with him, by *enforcing* the ill con-
ſequence of his refusal to take the office, which
ad be interpreted to his diſlike of the court.

reason.—To avoid all appearance of diſaffec-
tion, I have taken care to *enforce* loyalty by an
acible argument. *Swift.* 6. To compel; to
strain.—

For competence of life I will allow you,
that lack of means *enforce* you not to evil.

Shakeſpeare.

What diſſtain conceived by that queen, that ſo
deſt a rebel ſhould prevail againſt her, did
he and almoſt *enforce* her to ſend over that
poor army. *Davies on Ireland.* 7. To preſs
in a charge. Little uſed.—

1. This point charge him home, that he affects
tyrannick power: If he evade us there,
Enforce him with his envy to the people,
And that the ſports got on the Antians

Was never diſtributed. *Shakeſp. Coriolanus.*

(2.) * **TO ENFORCE.** *v. n.* To prove; to e-
ſe, to ſhew beyond contradiction.—Which
in ſuch caſe we muſt obey, unleſs there be
ſome ſhew'd, which may neceſſarily *enforce* that
law of reaſon, or of God, doth enjoin the
contrary. *Hooker.*

* **ENFORCEDLY.** *adv.* [from *enforce*.] By

violence; not voluntarily; not ſpontaneouſly; not
by choice.—

If thou did'ſt put this four cold habit on,
To caſtigat thy pride, 'twere well, but thou
Doſt it *enforcedly*; thou'dſt courtier be,
Were thou not beggar. *Shakeſp. Timon.*

* **ENFORCEMENT.** *n. f.* [from *enforce*.] 1.
An act of violence; compulſion; force offered.—

Confels 'twas hers, and by what rough *en-
forcement*

You got it from her. *Shakeſpeare.*

—He that contendeth againſt theſe *enforcements*,
may eaſily maſter or reſiſt them. *Raſleigh's Hiſtory.*

2. Sanction; that which gives force to a law.—

The rewards and puniſhments of another life,
which the Almighty has eſtabliſhed as the *enforce-
ments* of his law, are of weight enough to deter-
mine the choice. *Locke.* 3. Motive of conviction;

urgent evidence.—The perſonal deſcent of God
himſelf, and his aſſumption of our fleſh to his di-
vinity, was an *enforcement* beyond all the methods
of wiſdom that were ever made uſe of in the world.

Hammond on Fundamentals. 4. Preſſing ex-
igence.—

More than I have ſaid,
The leiſure and *enforcement* of the time
Forbids to dwell on. *Shakeſp. Richard III.*

* **ENFORCER.** *n. f.* [from *enforce*.] Compel-
ler; one who effects by violence.—When a man
tumbles a cylinder or roller down an hill, 'tis cer-
tain that the man is the violent *enforcer* of the firſt
motion of it. *Hammond's Fundamentals.*

ENFORD, a village W. of Ewerley, Wilts.

* **ENFOULDRED.** *adj.* [from *foudre*, French.]
Mixed with lightning. Obsolete.—

Heart cannot think what courage and what
cries,

With foul *enfoldred* ſmoak and ſlaſhing fire,
The belt-bred beaſt threw forth unto the ſkies.

Fairy Queen.

* **TO ENFRANCHISE.** *v. a.* [from *franchise*.]
1. To admit to the privileges of a freeman.—The
Engliſh colonies, and ſome ſepts of the Iriſh, were
enfranchiſed by ſpecial charters, were admitted to
the benefit of the laws. *Davies on Ireland.*—Ro-
mulus was the natural parent of all thoſe people
that were the firſt inhabitants of Rome, or of
thoſe that were after incorporated and *enfranchiſed*
into that name, city, or government. *Hale's
Origin of Mankind.* 2. To ſet free from ſlavery.

—Men, forbearing wine, come from drinking
healths to a draught at a meal; and laſtly, to diſ-
continue altogether: but if a man have the forti-
tude and reſolution to *enfranchiſe* himſelf at once,
that is the beſt. *Bacon's Eſſays.*—If they won a
battle, priſoners became ſlaves, and continued ſo
in their generations, unleſs *enfranchiſed* by their
maſters. *Temple.* 3. To ſet free or releaſe from cuſ-
tody.—

His miſtreſs
Did hold his eyes lockt in her cryſtal looks
—Belike, that now ſhe hath *enfranchiſed* them,
Upon ſome other pawn for ſealty. *Shakeſp.*

4. To denizen; to endenizen.—Theſe words have
been *enfranchiſed* amongſt us. *Watts.*

* **ENFRANCHISEMENT.** *n. f.* [from *enfranchiſe*.]
1. Inveſtiture of the privileges of a deni-
zen.—The incorporating a man into any ſociety,

or

or body *politick*. For example, he that is by charter made denizen of England, is said to be enfranchised; and so is he that is made a citizen of London, or other city, or burghs of any town corporate, because he is made partaker of those liberties that appertain to the corporation. *Cowel.*

His coming hither hath no farther scope,
Than for his lineal royalties, and to beg
Enfranchisement immediate on his knees.

Shakefp. Richard II.

a. Release from prison or from slavery.—

Never did captive with a fier heart
Cast off his chains of bondage, and embrace
His golden uncontroul'd *enfranchisement*.

Shakefp. Richard II.

* *ENFROZEN*. *particip.* [from *frozen*.] Congealed with cold. Not used.—

Yet to augment the anguish of my smart,
Thou hast *enfrozen* her disdainful breast,
That no one drop of pity there doth rest.

Spenser on Love.

ENGADINA, a territory of the republic of the Grisons among the Alps; extending along the banks of the river Inn, from its source to the Tirolese. It is divided into the *Upper* and *Lower* :

1. **ENGADINA, LOWER**, has a fertile soil and produces corn and fruits abundantly. It is subdivided into 3 communities. Cernetz is the chief town.

2. **ENGADINA, UPPER**, is a beautiful district, but on account of its elevation produces little else but rye and barley, the cold weather setting in early and ending late. Even in summer, the air is often very piercing and the corn much hurt by hoar frost. Hence the Italian proverb, "*Engadina terra fina, se non fesse la pruina*," i.e. "Engadina would be a fine country, were there no frost." It is subdivided into two communities, and contains 4000 souls. Zuts is the capital.

(1.) * *To ENGAGE*. *v. a.* [*engager*, French.]

1. To make liable for a debt to a creditor.—

I have *engag'd* myself to a dear friend,
Engag'd my friend to his mere enemy,
'To feed my means. *Shakefp. Merch. of Venice.*

2. To impawn; to stake.—

They most perfidiously condemn

Those that *engag'd* their lives for them. *Hudib.*

3. To enlist; to bring into a party.—All wicked men are of a party against religion: some lust or interest *engageth* them against it. *Tillotson.*

4. To embark in an affair.—So far had we *engaged* ourselves, unfortunate souls, that we lifted not to complain, since our complaints could not but carry the greatest accusation to ourselves. *Sidney.*

Before I *engage* myself in giving any answer to this objection of inconsumptible lights, I would see the effect certainly averred. *Digby on Bodies.* 5. To unite; to attach; to make adherent.—Good nature *engages* every body to him. *Addison.* 6. To induce; to win by pleasing means; to gain.—

To ev'ry duty he could minds *engage*,
Provoke their courage, and command their rage.

Waller.

His beauty these, and those his blooming age,
The rest his house and his own fame *engage*.

Dryden's Æneid.

So shall I court thy dearest truth,
When beauty ceases to *engage*;

So thinking on thy charming youth,
I'll love it o'er again in age.

Prim.

7. To bind by any appointment or contract.—We have been firm to our allies, without declining any expence to which we had *engaged* ourselves, and we have even exceeded our engagement. *Atterbury.* 8. To seize by the attention; as, he was deeply *engaged* in conversation. 9. To employ to hold in business.—

For I shall sing of battles, blood, and rage,
Which princes and their people did *engage*.

Dryden.

10. To encounter; to fight.—

The rebel knave, who dares his prince as
gaze,

Proves the just victim of his royal rage. *Ag.*

(1.) * *To ENGAGE*. *v. n.* 1. To conflict; to fight.—Upon advertisement of the Scots and the earl of Holland was sent with a body to meet and *engage* with it. *Charend.* 2. To embark in any business; to enlist in any party.—

'Tis not indeed my talent to *engage*

In lofty trifles, or to swell my page

With wind and noise.

Dryden's Pers.

* **ENGAGEMENT**. *n. s.* [from *engager*; *engagement*, French.] 1. The act of engaging, in pawning, or making liable to a debt. 2. Obligation by contract.—We have, in expence, executed our *engagements*. *Atterbury.* 3. Adherence to a party or cause; partiality.—This practice will be obvious to any who impartially, and without *engagement*, is at the pains to examine. *Swift.* 4. Employment of the attention.—Play, either our too constant or too long *engagement* in it, comes like an employment or profession. *Rogers.* 5. Fight; conflict; battle. A word very peculiar.—

Our army, led by valliant Torrismood,
Is now in hot *engagement* with the Moors. *Dry.*

Encourag'd by despair, or obstinate

To fall like men in arms, some dare renew
Feeble *engagement*, meeting glorious fate

On the firm land.

Pope.

6. Obligation; move.—This is the greatest *engagement* not to forfeit an opportunity. *Hammond's Fundamentals.*

(1.) **ENGANNO, or DECEIT ISLAND**, an island in the Eastern sea, a little distant from the SW. corner of the island of Sumatra. Lon. 102. 44. E. Lat. 5. 9. S.

(2.) **ENGANNO TROMPEUR, or FALSE CAPE**, the Eastermost land of Hispaniola, 16½ miles N. of Point L'Epee. Lon. 71. 25. W. of Paris. Lat. 19. 3. N.

* *To ENGAEOL*. *v. a.* [from *gaol*.] To imprison; to confine.—

Within my mouth you have *engaeol'd* my
tongue,

Doubly portcullis'd with my teeth and lips.

Shakspeare.

* *To ENGARRISON*. *v. a.* [from *garrison*.] To protect by a garrison.—Neptune with a guard doth *engarrison* her strongly. *Howell.*

ENGARSBY, a village in Leicestershire.

ENGASTRIMYTHI, in Pagan theology, the Pythians, or priestesses of Apollo, who delivered oracles from within, without any action of the mouth or lips. The ancient philosophers, &c.

re divided upon the subject of the engastrimythi. Hippocrates mentions it as a disease; others will are it a kind of divination; others attribute it to be possession of an evil spirit; and others to art and mechanism. M. Scottus maintains, that the engastrimythi of the ancients were poets, who, when the priests could not speak, supplied the defect by explaining in verse what Apollo dictated in the cavity of the basin on the sacred tripod.

ENGAYNES, a village in Essex, between Great and Little Claxton.

ENGELACH, a town of Germany in Lower Saxony, 15 miles SW. of Alfeld.

ENGELBERG, an abbey of the Helvetic republic, in the late canton of Underwald, in a valley, 5 miles ESE. of Saxlen.

ENGELBRECHTS, a town of Austria, 5 miles NW. of Bavarian Waidhoven.

ENGELHARTZEL, a town of Austria, 9 miles E. of Passau.

ENGELHIAUS, a town of Bohemia, in the circle of Saatz, 2 miles ESE. of Carlsbad.

ENGELHOLM, a sea port of Sweden, E. of the Categat, with a good harbour, 45 miles W. of Christianstad. Lon. 12. 49. E. Lat. 56. 13. N.

ENGELSBERG, a town of Silesia, in the principality of Appau, 5 miles NNW. of Freuenthal.

ENGELSBURG, a town of Prussia, in the territory of Culm; 12 miles NE. of Culm.

ENGELSDORF, a town of Bohemia, in the circle of Boisslau, 10 miles NNE. of Krottau.

ENGELSTEIN, a town of Prussia, in the province of Natangen, 48 miles SE. of Königsberg.

ENGELSTETTEN, a town of Germany, in the archduchy of Austria, 23 miles E. of Vienna.

ENGEN, a town of Suabia, in the principality of Stuhlingen, 21 miles NNW. of Constance.

(1.) * To ENGENDER. *v. a.* [*engendrer*, Fr.] To beget between different sexes.—This baselove is *engendered* betwixt lust and idleness. *Wily.* 2. To produce; to form.—

Oh nature! thou, who of the self-same mettle,

Whereof thy proud child, arrogant man, is pufft,
Engender'st the black toad and adder blue.

Shakesp. Timon.

Again, if souls do other souls beget,
'Tis by themselves, or by the body's pow'r:

If by themselves, what doth their working let,
But they might souls *engender* ev'ry hour?

Darvies.

To excite; to cause; to produce.—
Say, can you fast? Your stomachs are too young,

And abstinence *engenders* maladies. *Shakesp.*

The presence of a king *engenders* love
Amongst his subjects and his loyal friends. *Shakef.*

That *engenders* thunder in his breast,
And makes him roar these accusations forth.

Shakesp.

—It unloads the mind, *engenders* thoughts, and
increases virtue. *Addison.* 4. To bring forth.—

Vice *engenders* shame, and folly broods o'er grief. *Prior.*

(2.) * To ENGENDER. *v. n.* To be caused; to be produced.—

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Thick clouds are spread, and storms *engender* there. *Dryden.*

ENGENTHAL, a town of Germany, in the circle of Franconia, 13 miles E. of Nuremberg.

(1.) ENGER, or } a county of Germany, in
(1.) ENGERS, } the circle of the Lower Rhine, and electorate of Treves.

(2.) ENGERS, the capital of the above county, seated on the E. bank of the Rhine, 11 miles N. of Coblenz. Lon. 7. 32. E. Lat. 50. 35. N.

(3.) ENGER SEE, a lake of Carinthia, 10 miles NNW. of Feltkirchen.

ENGERSTORFF, in Austria, 10 miles SW. of Zisterdorf.

ENGHAM, a village near Swinford, Berkshire.

ENGHEIM, } a rich town of the French re-
ENGHIEN, or } public, in the department of

ENGHUIN, } Jemappes, and ci-devant province of Austrian Hainault; famous for a battle fought near it, commonly called *the battle of*

STENKIRK, between the British under K. William III. and the French under Marshal Luxembourg; wherein the latter were victorious; and Gen. Mackay, the victor at Killcrankie in 1689, was killed. Enghein lies 15 miles SW. of Brussels.

Lon. 4. 5. E. Lat. 50. 42. N.

(1.) ENGIA, EGINA, or EYINA, an island of European Turkey, in the gulf so called (Nº 3.) near the coast of the Morea; anciently called OENONE, ÆGINA, and MYRMIDONIA. Some geographers state it to be 22½ miles, others 30, in circumference. Many fine reliëts of antiquity are still to be seen on it. See ÆGINA, Nº 2.

(2.) ENGIA, or ENGINA, the capital of the above island. See ÆGINA, Nº 3. It contains about 800 houses and a castle; and lies 25 miles SSW. of Athens. Lon. 23. 59. E. Lat. 37. 42. N.

(3.) ENGIA, or } GULF OF, a gulf on the SE. coast of Turkey in Europe, so named from the island, (Nº 1.) between Livadia and the Morea; about 60 miles long from NW. to SE. and 25 broad at the mouth.

(1.) * ENGINE. *n. f.* [*engin*, French; *ingegno*, Italian.] 1. Any mechanical complication, in which various movements and parts concur to one effect. 2. A military machine.—

This is our *engine*, towers that overthrows;
Our spear that hurts, our sword that wounds
our foes. *Fairfax.*

3. Any instrument.—The sword, the arrow, the gun, with many terrible *engines* of death, will be well employed. *Raleigh's Essays.*

He takes the scissars, and extends
The little *engine* on his fingers ends. *Pope.*

4. Any instrument to throw water upon burning houses.—

Some cut the pipes, and some the *engines* play;
And some, more bold, mount ladders to the fire. *Dryden.*

5. Any means used to bring to pass, or to effect. Usually in an ill sense.—Prayer must be divine and heavenly, which the devil with all his *engines* so violently opposeth. *Duppa's Rules for Devotion.*

6. An agent for another. In contempt.—

They had th' especial *engines* been, to rear
His fortunes up into the state they were. *Daniel.*

(2.) ENGIN, in mechanics, is a compound machine,

E e e

chise,

chine, made of one or more mechanical powers, as levers, pulleys, screws, &c. in order to raise, cast, or sustain any weight, or produce any effect which could not be easily effected otherwise. The word is formed of the French *engin*, from the Latin *ingenium*, wit; from the ingenuity exerted in the invention of engines to augment the effect of moving powers.

(3.) ENGINE FOR EXTINGUISHING FIRES. See HYDROSTATICS.

(4.) ENGINE, PILE, one contrived for driving piles. See PILE ENGINE.

(5.) ENGINE, STEAM, a machine to raise water by the force of steam. See STEAM-ENGINE.

(1.) * ENGINEER. *n. f.* [*engineer*, Fr.] One who manages engines; one who directs the artillery of an army.—

For 'tis the sport to have the engineer
Hoist with his own petard. *Shakeſp. Hamlet.*
Him thus enrag'd,

Defcrying from afar, ſome engineer,
Dext'rous to guide th' unerring charge, deſign'd;
By one nice ſhot, to terminate the war. *Philips.*

—An author who points his ſatire at a great man, is like the engineer who ſignalized himſelf by this bagenorous practice. *Addiſon.*

(2.) AN ENGINEER, in the military art, ſhould be poſſeſſed of a perfect knowledge in mathematics, ſo as to delineate upon paper, or mark upon the ground, all ſorts of forts, and other works proper for offence and defence. He ſhould underſtand the art of fortification, ſo as not only to be able to diſcover the defects of a place, but to find a remedy proper for them; as alſo how to make an attack upon, as well as to defend, the place. Engineers ſhould therefore be brave as well as ingenious. When at a ſiege they have narrowly ſurveyed the place, they are to make their report to the general, by acquainting him which part they judge the weakeſt, and where approaches may be made with moſt ſucceſs. Their buſineſs is alſo to delineate the lines of circumvallation and contravallation, taking all the advantages of the ground; to mark out the trenches, places of arms, batteries, and lodgments, taking care that none of their works be flanked or diſcovered from the place.

* ENGINERY. *n. f.* [from *engine*.] 1. The art of managing artillery.—They may deſcend in mathematics to fortification, architecture, *engineery*, or navigation. *Milton on Education.* 2. Engines of war; artillery.—

We ſaw the foe
Approaching, groſs and huge, in hollow cube
Training his devilish *engineery*. *Milton.*

* TO ENGIRD. *v. a.* [from *gird*.] To encircle; to ſurround; to environ; to encompass.—

My heart is drown'd with grief,
My body round *engirt* with miſery;
For what's more miſerable than diſcontent?

That gold muſt round *engird* theſe brows of mine. *Shakeſp.*

(I. 1.) ENGLAND, the ſouthern and laſt diſviſion of Great Britain. Including Wales, it is of a triangular form, and lies between Lon. 2° E. and 7° W. and between Lat. 49° and 56° N. extending about 400 miles in length from S. to N. and

300 on an average in breadth. From the S. Foreland in Kent, which may be termed the E. point of the triangle, to Berwick on Tweed, which is the N. its length, in a ſtraight line, is 345 miles; from Berwick to the Lands End in Cornwall, which is its W. it is 425, and from thence to the S. Foreland, it is 340 miles. It is bounded by Scotland on the N. by the Engliſh Channel on the S. which ſeparates it from France; by the German Sea on the E. and NE. and by St George's, or the Irith Channel, on the W.

(2.) ENGLAND, ANCIENT ACCOUNTS OF. At what time the iſland of Britain was firſt peopled is uncertain; nor do we know whether the ſouthern or northern parts were firſt inhabited. We have no accounts that can be depended upon before the arrival of Julius Cæſar, and it is certain he found the ſouthern parts full of people of a very warlike diſpoſition. Theſe people, according to Cæſar, were a colony of the Gauls; and this opinion is embraced by moſt of the ancient as well as modern writers. It is chiefly founded on the agreement obſerved by the Romans between the two nations in their cuſtoms, manners, language, religion, government, way of fighting, &c. The more northern inhabitants, according to Tacitus, came from Germany. This he infers from the make of their limbs; but Cæſar ſimply calls the *Aborigines*.

(3.) ENGLAND, ANCIENT CUSTOMS OF THE ORIGINAL INHABITANTS OF. The Britons, according to the Roman hiſtorians, were very numerous, at the time of Cæſar's invasion, and their country well ſtocked with cattle. The houſes reſembled thoſe of the Gauls; and they uſed copper or iron plates weighed by a certain ſtandard inſtead of money. Their towns were confuſed parcel of huts placed at a ſmall diſtance from one another, generally in the middle of wood, to which all the avenues were ſlightly guarded with ramparts of earth, or with trees. All the nations were in a ſtate of the moſt wretched barbariſm, even when compared with the barbarous Gauls on the continent. The uſe of clothes was ſcarce known in the iſland. Only the inhabitants of the ſouthern coaſt covered their nakedneſs with the ſkins of wild beaſts; and this rather to avoid giving offence to the ſtrangers who came to trade with them, than out of any principle of decency. It was a general cuſtom among the Britons to paint their bodies with the juice of wood. They ſhaved their beards, all except their upper lip, and wore long hair. They are alſo ſaid to have had their wives in common, but this is denied by judicious antiquaries, who think it either a ſtandards or a miſtake of their Roman conquerors, who being themſelves addicted to the moſt beaſtly vice, thought it impoſſible for ſeveral families to live together without having their women in common. The arms of the Britons were a ſword, a ſhort lance, and a ſhield. Breſt-plates and helmets they conſidered as incumbrances. They uſually fought in chariots, ſome of which were armed with ſcythes at the wheels; they were fierce and cruel, and exceedingly bloodthirſty. When driven to diſtreſs, they could ſubſiſt even on the bark and roots of trees; and Dio Caſſius tells us that they had ready, on all occaſions, a certain kind

kind of food, of which, if they took but the quantity of a bean, they were not troubled with hunger or thirst for a long time after. The southern nations, were more civilized; and the Cantii, more so than any of the rest. See BRITAIN, I. § 7.

(4.) ENGLAND, ANCIENT DIVISION OF. England, including Wales, when first invaded by the Romans, was divided into 17 petty states. 1. The Damnonii, Dunmonii, or Donnonii, inhabited Cornwall and Devonshire. 2. The Durotriges possessed Dorsetshire. 3. The Belgæ Somersetshire, Wiltshire, and the greater part of Hampshire. 4. The Atrebatæ inhabited Berkshire. 5. The Regni inhabited Surrey, Suffex, and part of the coast of Hampshire. 6. The Cantii inhabited and gave name to Kent. 7. The Dobuni are placed by Ptolemy on the N. side of the Thames, near its head, in Gloucestershire and Oxfordshire. 8. The Cattieuchlani, Calyueuchlani, Cattidudani, or Cathcludani, inhabited Buckinghamshire, Bedfordshire, and Hertfordshire. 9. The Trinobantes possessed Essex and Middlesex. 10. The Iceni, whose country comprehended Suffolk, Norfolk, Cambridge, and Huntingdonshire, are by Ptolemy called *Simeni*, and by others *Tigeni*. Cam-
den is of opinion, that they were the people whom
Cæsar calls *Cenomagni*. 11. The Coritani inha-
bitated Northamptonshire, Leicestershire, Rutland-
shire, Lincolnshire, Nottinghamshire, and Der-
byshire. 12. The Cornavii possessed Warwick-
shire, Worcesterhire, Staffordshire, Shropshire,
and Cheshire. 13. The Silures inhabited Radnor-
shire, Brecknockshire, Glamorganhire, Hereford-
shire, and Monmouthshire. 14. The Demetz in-
habited part of Caermarthenhire, Pembrokehire,
and Cardiganshire. 15. The country of the Or-
bices comprehended Montgomeryshire, Merio-
nethshire, Caernarvonshire, Denbighshire, and
Flintshire. 16. The Brigantes possessed Yorkshire,
Durham, Lancashire, Westmoreland, and Cum-
berland. 17. Northumberland was held by the
Ottadini, Ottadani, or Ottalini. Their country,
according to some, reached from the Tyne to the
Forth; though the most common opinion is, that
it reached only to the Tweed. The above names
are plainly Roman, but their etymology is doubt-
less British, though any attempts to trace their
derivation from words in the old British language,
must now be attended with great uncertainty and
obscurity. See BRITAIN, N° I. § 3, 4.

(5.) ENGLAND, CLIMATE OF. Dr Aikin, in his *England Delineated*, observes, that, "with respect to climate, England is situated in the N. part of the temperate zone, so that it enjoys but a scanty share of the genial influence of the sun. Its atmosphere is inclined to chillness and moisture, subject to frequent and sudden changes; and is more favourable to the growth, than to the ripening, of the products of the earth. No country is clothed with so beautiful and lasting a verdure; but the harvests, especially in the northern parts, frequently suffer from unseasonable rains; and the fruits often fall short of their perfect maturity. The rigours of winter, however, as well as the parching heats of summer, are felt here in a much less degree than in parallel climates on the continent; a circumstance common to all islands. While the sea ports of Holland and Germany are, every

winter, locked up with ice, those of England, and even Scotland, are never known to suffer this inconvenience. The western side of the kingdom, receiving first the great clouds from the Atlantic Ocean, which are afterwards intercepted in their passage by the middle ridge of hills, is considerably more exposed to rain than the eastern; but the latter, is more frequently involved in fogs and mists. The whole country, some particular spots excepted, is sufficiently healthy; and the natural longevity of its inhabitants is equal to that of almost any region."

(6.) ENGLAND, CONSTITUTION AND GOVERNMENT OF. The English, or rather the British constitution, is a limited monarchy, or a government by the united powers of king, lords, and commons. It has long been justly celebrated as uniting the advantages and avoiding the inconveniences of absolute monarchy, aristocracy and democracy. It originated among the Anglo-Saxons, and was brought to a high degree of perfection by the patriotic monarch, ALFRED the Great. It was afterwards considerably infringed upon by William the Conqueror and his successors, but was restored by the MAGNA CHARTA; and after repeated encroachments by different monarchs, was finally ameliorated, established and confirmed, by the glorious revolution in 1688. The executive power is vested in the king, and in the ministers, judges, juries, and other gradations of magistracy under him. The legislative authority is entrusted to the two houses of parliament. See COMMONS, KING, LAW, LIBERTY, LORDS, MAGNA CHARTA, PARLIAMENT, PEERS, RIGHTS, &c.

(7.) ENGLAND, ECCLESIASTICAL GOVERNMENT OF. Since the reign of Henry VIII. the sovereign of England has been called, in public writs, the supreme head of the church; but this title conveys no spiritual meaning, as it only denotes the regal power to prevent any ecclesiastical differences, or in other words, substitutes the king in place of the pope, with regard to temporalities and the internal economy of the church. The kings of England never intermeddle in ecclesiastical disputes. They only give a sanction to the legal rights of the clergy. The church of England, under this description of the monarchical power, is governed by two archbishops, and 24 bishops, besides the bishop of Sodor and Man, who, not being possessed of an English barony, does not sit in the house of peers. See ARCHBISHOP and BISHOP. England contains about 60 archdeacons. Subordinate to them are the rural deacons, formerly styled *archpresbyters*, who signify the bishop's pleasure to his clergy, the lower class of which consists of parish priests (who are called rectors or vicars), deacons, and curates. See CURATE, DEACON, PARSON, and VICAR. The ecclesiastical government of England is, properly speaking, lodged in the convocation; which is a national representation or synod, and answers pretty near to the idea of a parliament. They are convoked at the same time with every parliament; and their business is to consider of the state of the church, and to call those to an account who have advanced new opinions, inconsistent with the doctrines of the church of England. Some high-flying clergy-

men during the reign of queen Anne, and in the beginning of that of George I. raised the powers of the convocation to a height that was inconsistent with the principles of religious toleration, and indeed of civil liberty: so that the crown was obliged to exert its prerogative of calling the members together, and of dissolving them; and ever since they have not been permitted to sit for any time, in which they could do business.

(8.) **ENGLAND, GENERAL MODERN DIVISIONS OF.** Since the Norman conquest, England has been divided into six circuits, each containing a certain number of counties; which are subdivided into **WAPENTAKES**, or hundreds, and parishes. Two judges are appointed for each circuit, which they visit in the spring and autumn, for administering justice to subjects at a distance from the capital. In holding the lent (or spring) assizes, the northern circuit extends only to York and Lancaster; the assizes at Durham, Newcastle, Carlisle, and Appleby, being held only in the autumn, and distinguished by the appellation of the *long circuit*. These circuits and counties are as follow: 1. *The Home Circuit* contains the counties of Essex, Hertford, Kent, Surry, and Suffex. 2. *Norfolk Circuit* contains those of Bucks, Bedford, Huntingdon, Cambridge, Suffolk, and Norfolk. 3. *Oxford Circuit*, Oxon, Berks, Gloucester, Worcester, Monmouth, Hereford, Salop, and Stafford. 4. *Midland Circuit*, Warwick, Leicester, Derby, Nottingham, Lincoln, Rutland, and Northampton. 5. *Western Circuit*, Hants, Wilts, Dorset, Somerset, Devon and Cornwall. 6. *North-eastern Circuit*. York, Durham, Northumberland, Lancaster, Westmoreland, and Cumberland. Middlesex and Cheshire are not comprehended in any circuit; the former being the seat of the supreme courts of justice, and the latter a county palatine. Besides the 40 counties into which England is divided, there are counties corporate, consisting of certain districts, to which the liberties and jurisdictions peculiar to a county have been granted by royal charter. See **COUNTY**, (§ 1, 3.) Thus the city of London is a county distinct from Middlesex; the cities of York, Chester, Bristol, Norwich, Worcester, and the towns of Kingston upon Hull, and Newcastle upon Tyne, are counties of themselves, distinct from those in which they lie. The same may be said of Berwick upon Tweed, which has within its jurisdiction a small territory of two miles on the N. side of the river; and which, though it lies in Scotland, is considered in law, as distinct from both kingdoms. See **BERWICK**, No 2.

(9.) **ENGLAND, HISTORY OF, FROM CÆSAR'S ARRIVAL IN BRITAIN, TO HIS DEPARTURE.** Before the time of Julius Cæsar, the Romans had scarcely any knowledge of Britain; but that conqueror having subdued most of the Gallic nations on the opposite side of the channel, began to think of extending his conquests by the reduction of Britain. The motive for this expedition, ascribed to him by Suetonius, was a desire of enriching himself by the British pearls, which were then very much esteemed. The pretence, however, to justify his invasion, was, that the Britons had sent assistance to the Gauls during his wars with them. Cæsar undertook his first expedition when

the summer was far spent, and therefore only proposed to view the island, and learn something of the manners and customs of the natives; after which he could more easily ensure a permanent conquest on his return. Having marched all his forces into the country of the Morini, in Gaul, (the late province of Picardy,) from whence was the shortest passage into Britain; he ordered all the vessels that lay in the neighbouring ports, and a fleet which he had built the year before, to attend him. The Britons alarmed at his preparations, sent ambassadors with offers of submission; but Cæsar though he received them with great kindness, did not abandon his intended scheme. He waited till the arrival of C. Volusenus, whom he had sent out with a single galley to make discoveries on the coast. Volusenus did not land, but, having made what observations he could, returned after five days absence, and Cæsar immediately set sail for Britain. His force consisted of two legions embarked on board 80 transports, and he appointed 18 more which lay wind-bound about 8 miles off, to convey over the cavalry; but these last orders were too slowly executed, which occasioned some difficulty in his landing. All the British nations at this time were very brave and resolute, owing to the continual dissensions among themselves. They proved therefore very formidable enemies to the Romans; but the same dissensions, which had taught them the art of war, also prevented them from uniting. As soon as they perceived Cæsar's fleet approaching, a number of cavalry and chariots were dispatched to oppose his landing, while a considerable body of infantry hastened after. What chiefly embarrassed the Romans in their attempt to land, was the largeness of their ships, which required a considerable depth of water. The soldiers therefore were obliged to leap into the sea while loaded with their armour; and at the same time to encounter the enemy, who were quite disengaged, as they either stood on dry ground, or waded but a little way into the water. Cæsar perceiving this disadvantage, ordered his galleys to advance, with their broad sides towards the shore, in order to drive the Britons from the water side with their slings and arrows. On this the Britons, surprised at the galleys, a sort of shipping they had never before seen, began to give ground. The fight, however, continued for some time, greatly to the disadvantage of the Romans; till at last Cæsar, observing the distress of his men, caused several of his boats to be manned, and sent them to the assistance of those who were most exposed to the enemy's assault. The Romans then soon got the better of the undisciplined barbarians, however brave, and made good their landing; but they were unable to pursue the enemy for want of cavalry, which had not yet arrived. The Britons were so disheartened with this bad success, that they immediately sent ambassadors to sue for peace; which was granted, on condition of their delivering a certain number of hostages for their fidelity. Part of these they brought immediately, and promised to return in a few days with the rest, who, they said, lived at some distance. But, in the mean time, the 18 transports which carried Cæsar's cavalry, being driven back by a violent storm,

arm, and the fleet being greatly damaged, the Britons broke their engagements, and fell unexpectedly on the 7th legion while busied in foraging. Cæsar hastened to their assistance with two cohorts, at last repulsed the enemy. This, however, proved only a temporary deliverance; for the Britons, thinking it would be possible to cut off all the Romans at once, drew together a great body of horse and foot, which boldly advanced to the Roman entrenchments. But Cæsar came out to meet them; and the undisciplined Britons being unable to cope with the Romans, were put to flight with great slaughter. Having burned several towns and villages, the victors returned to their camp, where they were soon followed by deputies from the Britons. Cæsar being in want of horse, and afraid lest another storm should destroy the remainder of his fleet, granted them peace, on condition of their sending him double the number of hostages into Gaul which they had before promised. The same night he set sail, and arrived safe in Gaul. The Britons no sooner perceived the Romans gone, than they again broke through their engagements. Of all the states who had promised to send hostages, only two performed their promises; and this neglect so provoked Cæsar, that he determined to return the year following with a far greater force. Having, therefore, caused his old vessels to be refitted, and many new ones to be built, he arrived off the coast of Britain with a fleet of 600 ships and 23 galleys. The Britons made no opposition to his landing; but Cæsar, getting intelligence that an army was assembled at no great distance, marched in quest of them. He found them encamped on the banks of a river, supposed to be the Stour, 12 miles from the place where he had landed. They attempted to oppose his passage; but being briskly attacked by the Roman cavalry, they were obliged to retire into a wood, all the avenues of which were blocked up by trees cut down for that purpose. This fortification, however, proved insufficient to protect them. The 7th legion having burst themselves into a testudo, and thrown up a ramp against their works, drove them from their camp; but as the day was far spent, a pursuit was not thought advisable. Next morning Cæsar, with the greatest part of his army, which he divided into three bodies, marched out in quest of the enemy. But when he was within sight of their rear, he was informed, that his fleet was greatly damaged by a violent storm which had opened the preceding night. This put an end to the pursuit for that time; but Cæsar having employed all the carpenters he had with him, and sent for others from Gaul, to repair the damage, resolved to prevent misfortunes of this kind for the future. He therefore drew all his ships ashore, and included them within the fortifications of his camp. This arduous undertaking employed his whole army for 10 days; after which he again set out in quest of the enemy. The Britons had made the best use they could of the respite afforded them by the storm. They were headed by CASSIBELAN, king of the Trinobantes. He had formerly made war upon his neighbours; and having rendered himself terrible to them, was esteemed the most proper person for leading them against the

common enemy; and as several states had now joined their forces, the British army was very numerous. Their cavalry and chariots attacked the Romans on their march; but were repulsed with loss, and driven into the woods. The Romans pursued them too eagerly, and thus lost some of their own men; which encouraged the Britons to make another fierce attack; but in this also they were finally unsuccessful, and obliged to retire. Next day the Britons suddenly attacked the Roman legions as they were foraging; but meeting with a vigorous resistance, they soon took themselves to flight. The Romans pursued them so closely, that having neither time to rally nor get down from their chariots, great numbers of them were cut in pieces: and this overthrow had such an effect upon the auxiliaries of Cassibelan, that they all abandoned him; nor did the Britons ever afterwards engage Cæsar with united forces. Cæsar pursuing his victory, marched towards the Thames, with a design to enter the territories of the Trinobantes. The river was fordable only at one place, but when he came to it, he found the enemy's forces drawn up in a considerable body on the opposite bank, which was fortified with sharp stakes. They had likewise driven many stakes of the same kind into the bottom of the river, the tops of which were covered with water. These stakes are still visible at WALTON in Surry. They are made of oak; and though they have been so long in the water, are as hard as Brazil, and as black as jet; and have sometimes been pulled out to make knife handles. Cæsar was not dismayed at these difficulties, which he learned from prisoners and deserters. He ordered the cavalry to enter first, and the foot to follow. The soldiers advanced with such resolution, that though the infantry were up to the chin in water, the enemy abandoned the bank and fled. After this defeat, Cassibelan dismissed all his forces except about 4000 chariots, with which he watched the motions of the Romans, harassing them by cutting off straggling parties, &c. This, however, was not sufficient to keep up the spirits of his countrymen. On the contrary, they desposed him, and chose Mandubratius, whose father had been murdered by Cassibelan when he usurped the kingdom. The young prince had fled to Cæsar, who gave him protection: and the Trinobantes now offered to submit to the conqueror, provided he would give them Mandubratius for their king. Cæsar readily complied with their request, upon their sending him 40 hostages: and the submission of the Trinobantes was soon followed by that of other states and tribes; for each of the 17 nations were composed of several different tribes. Cæsar next marched to Verulamium, Cassibelan's capital, which he still kept possession of; but though the place was strongly fortified, the Britons soon fled. Many were taken, and many more cut in pieces. After this loss, Cassibelan, as his last resource, drew into confederacy with him 4 kings, (as Cæsar styles them) or rather chiefs of the Cantii. Their names were Cingetorix, Corvilius, Taximagulus, and Segonax. These, having raised what forces they could, attacked the camp where the ships were laid up: but the Romans having made a sally, repulsed them with great slaughter, after

after which, Cassibelan submitted. A peace was concluded on these terms, that the Britons should pay an annual tribute to the Romans, that Cassibelan should leave Mandubratius in peaceable possession of his dominions, and that he should deliver a certain number of hostages. Cæsar then set sail with his whole fleet from Britain, to which he never returned. Such is the account given by Cæsar of his two expeditions into Britain; but Dio Cassius tells us, that the Britons utterly defeated the Roman infantry, though they were at last put in disorder by their cavalry. Horace and Tibullus, in many parts of their works, speak of the Britons as a people not yet conquered. Tacitus says, that Cæsar rather showed the Romans the way to Britain, than put them in possession of it; and Lucan tells us plainly, that Cæsar turned his back to the Britons and fled. This, however, considering the consummate military genius of Cæsar, is by no means probable. That he left Britain during winter, was probably to prevent insurrections among the Gauls; and his ambition would certainly be more gratified by being emperor of Rome, than conqueror of Britain.

(10.) ENGLAND, HISTORY OF, FROM CÆSAR'S DEPARTURE TO THE CAPTIVITY OF CARACTACUS. The departure of Julius Cæsar, which happened about A. A. C. 53, left the Britons without any fear of a foreign enemy. We are not, therefore, to imagine, that they would regard their promises of paying tribute; nor was it probably demanded for many years afterwards. Augustus had twice a design of invading Britain and forcing the inhabitants to pay the tribute promised to Julius Cæsar. Both times, however, he was prevented by revolts in different provinces, so that the Britons still continued to enjoy their liberty. They, however, courted the favour of the Romans by pretended submissions; but, in the reign of Claudius, the Romans set about reducing them to subjection in earnest. The occasion of this war is related by Dio Cassius as follows. "Cunobelinus, the third in succession from Cassibelan, being dead, his two sons, Togodumnus and Caractacus, succeeded to the throne; but whether they reigned jointly or separately, is not known. In their reign one Bericus, being exiled for sedition, fled with some of his partisans to Rome, and persuaded Claudius to make war on his countrymen. The Britons, on the other hand, resented the behaviour of Claudius in receiving these vagabonds, and therefore prohibited all intercourse with the Romans. A much smaller offence than this would have been sufficient to provoke that haughty nation to declare war. An army was therefore immediately ordered to Britain, under the command of Plautius prætor in Gaul. The soldiers at first refused to embark, from a superstitious notion, that they were going to be sent beyond the compass of the world; and this mutiny being reported to the Britons, they did not make the necessary preparations for their own defence. The Roman soldiers were soon brought to a sense of their duty; and set out from three different ports, in order to land in three different places of Britain at once. Being driven back by contrary winds, their fears began to return; but they resumed their courage on the appearance of a meteor shooting from the

east, which they imagined was sent from heaven to direct their course. They landed without opposition; and the Britons, not having drawn together a sufficient army, kept in small bodies behind their marshes, and in woods, in order to fight out the war till winter; which they imagined Plautius would, like Cæsar, spend in Gaul. The Roman general marched first in quest of the kings Togodumnus and Caractacus; both whom he found out, and defeated one after another. He then reduced part of the Dobunni, that time subject to the Cattiuchlani; and leaving a garrison to keep them in awe, he advanced to a river where the Britons lay carelessly encamped, supposing that the Romans could not pass it without a bridge. But the Germans in the Roman army had been accustomed to swim across the strongest currents in their heavy armour. They therefore passed the river first; and having fixed only upon the enemy's horses which drew the chariots, these formidable machines were rendered useless; and the Britons were put to flight soon as another part of the forces passed the river. They, however, engaged the Romans next day with great bravery. Victory continued long doubtful; but at length the Romans prevailed. The battle is thought to have been fought on the banks of the Severn. From thence the Britons fled to the mouth of the Thames. They were closely pursued, but the Romans being unacquainted with the flats and shallows of the river, were in great danger. The Germans, however, crossed by swimming as before, and the rest by a bridge farther up the river; so that the Britons were a short time surrounded on all sides, and their numbers cut in pieces. Many of the Romans, so, pursuing the fugitives with too great eagerness, were lost in the marshes.—In one of these battles Togodumnus was killed; but the Britons were so far from being disheartened, that they became more eager than ever, in order to revenge their death. Plautius, therefore, did not think proper to penetrate farther into the country, but contented himself with putting garrisons in the places he had already conquered. He then wrote to the emperor himself; who no sooner received an account of his success, than he set out for Britain; where he joined Plautius on the banks of the Thames. Soon after the arrival of Claudius, the Romans passed the Thames, attacked the British army, totally defeated it. The consequence was, the taking of Cunobeline's capital, and the submission of several neighbouring states. The emperor, however, did not make a long stay in the island, but left Plautius to pursue his conquests. When he did with such success, that, on his return to Rome, he was met without the gates, by the emperor himself, who, at his solemn entry, gave him the right hand.—The Britons seem to have made a very obstinate resistance to the Roman army about this time. Vespasian is said to have fought 30 battles with them; and the exploits of him and Titus, are also much celebrated by the Roman historians. In the 9th year of Claudius, P. Otho Scapula was sent into Britain. By his greater part of the 17 nations were at this time unconquered. Some of these had broken into the Roman territories; but Othorius falling unex-

dy upon them, put great numbers to the sword, and dispersed the rest. To prevent them for the future from making inroads into the territories of the Romans or their allies, he built several forts on the Severn, the Avon, and the Nen, reducing the country S. of these rivers to a Roman province. As he highly offended the Iceni, that, being joined by the neighbouring nations, they raised a considerable army, and encamped in an advantageous position, in order to prevent the Romans from penetrating farther into the island. Ostorius, we see, soon advanced against them. The Romans got the victory, and the enemy were pursued with great slaughter. The Roman general, having quelled an insurrection among the Brigantes, led his army against the Silures. They were headed by their king Caractacus, a most renowned warrior. He showed his military talents by choosing a very advantageous place for engaging the enemy. Tacitus tells us, "it was on the top of an exceeding steep mountain; and where the sides of it were inclining and accessible, he had walls of stone for a rampart. At the foot of the mountain flowed a river dangerous to be crossed, and an army of men guarded his entrenchments." This hill is thought to be *Caer-Cardoc* in Wiltshire, situated near the conflux of the rivers Coln and Tame, where the remains of ancient entrenchments are still visible.—On the approach of the enemy, Caractacus drew up his troops in order of battle, and according to Tacitus, told them, "That from this day, and this day, they must date their liberty rescued, or slavery for ever established. He then invoked the shades of those heroes who had expelled the dictator; those brave men by whose aid they still enjoyed freedom from Roman tribute and taxes, and by which their wives and children were as yet preserved from prostitution." The whole army then took a solemn oath either to conquer or die, and prepared for the charge with the most terrible shouts. Ostorius was somewhat dismayed when he considered the uncommon fierceness of the enemy, and the other difficulties which he had to encounter. He led on his men, however, to the charge; and the Romans were attended with their usual good fortune. The Britons were put to flight. Vast numbers on the field of battle and many more were taken prisoners. Among the latter were the wife, daughter, and the brothers of Caractacus. An unfortunate prince himself fled to Cartimundua, queen of the Brigantes, by whom he was detained up to the Roman general, who sent him thence to Rome. Caractacus bore his misfortunes with magnanimity; and when he came before the emperor, addressed him in the following manner. "If my moderation in prosperity, O emperor, I had been as conspicuous as my birth and fortune, I should now have entered this city as a friend, and not as a prisoner; nor would you have disdained the friendship of a prince descended from such illustrious ancestors, and governing many nations. My present condition, I own, is to you honourable, to me humiliating. I was formerly possessed of subjects, horses, arms, and treasure. Can you be surprised that I endeavoured to preserve them? If you Romans have a desire

to arrive at universal monarchy, must all nations, to gratify you, tamely submit to servitude? If I had submitted without a struggle, how much would it have diminished the lustre of my fall, and of your victory? And now, if you resolve to put me to death, my story will soon be buried in oblivion; but if you think proper to preserve my life, I shall remain a lasting monument of your clemency."—This speech had such an effect upon Claudius, that he immediately pardoned Caractacus and his whole family, and commanded them to be set at liberty.

(II.) ENGLAND, HISTORY OF, FROM CARACTACUS TO THE CONQUEST OF BRITAIN BY J. AGRICOLA. The Silures, notwithstanding this terrible blow, continued the war with great vigour, and gained considerable advantages over the Romans; which so much affected Ostorius, that he died of grief. He was succeeded by A. Didius, who restrained the incursions of the Silures, but was not able to restore Cartimundua queen of the Brigantes, who had been deposed by her subjects. Didius was succeeded by Veranius, and he by Suetonius Paulinus, who reduced the island of Anglesey. (See *ANGLESEY*, § 2.) But while Paulinus was employed in the conquest of this island, he was alarmed by the news of an almost universal revolt among those nations which had submitted to the Romans. The Britons, though conquered, still panted after independence; and the Roman yoke became every day more unsupportable, through the insolence and oppressions of the Roman soldiers. The Britons had been long discontented, when an event happened which kindled these discontents into an open flame. Prasutagus, king of the Iceni, a prince renowned for opulence and grandeur, had, by his last will, left the Roman emperor joint heir with his two daughters, in hopes of obtaining his favour and protection for them. But the event turned out very different. No sooner was he dead, than his houses and possessions were all plundered by the Roman soldiers. The queen *VOADICEA* remonstrated against this injustice; but, instead of obtaining any redress, she herself was publicly whipped, her daughters ravished, and all the relations of the late king reduced to slavery. The whole country also was plundered, and all the chiefs of the Iceni deprived of their possessions. Voadicea was a woman of too great a spirit tamely to bear such indignities. She easily persuaded the Iceni to take up arms, who, being joined by the Trinobantes, and some other nations, poured like a torrent on the Roman colonies. Every thing was destroyed with fire and sword. The 9th legion, which had been left under Petilius Cerealis, was defeated, the infantry totally cut in pieces, and the commander himself with the cavalry escaped with the utmost difficulty. Suetonius immediately left Anglesey, and marched to London. The inhabitants were overjoyed at his arrival, and used their utmost endeavours to detain him for their defence. But he refused to stay, and in a short time left the place, notwithstanding their intreaties. Suetonius was scarce gone, when Voadicea with her Britons entered, and put all they found in it to the sword. Many were tortured in the most cruel manner, and 70,000 persons are said to have perished on

this occasion at London and other Roman colonies. The Britons, now elated with success, assembled from all quarters in great numbers, so that Voadicea's army soon amounted to 230,000 men. They despised the Romans; and became so confident of victory, that they brought their wives and children in waggons to be spectators of the destruction of their enemies. The event was suitable to such ill-judged confidence. The Britons were overthrown with most terrible slaughter, no fewer than 80,000 being killed in the battle and pursuit; while the Romans had not above 400 killed, and not many more wounded. Voadicea, not able to survive so great a calamity, poisoned herself. By this overthrow the Britons who had been subdued were prevented from raising any more insurrections, and those who had not yet submitted to the Roman yoke, were intimidated from making incursions into their dominions. Nothing remarkable therefore happened for some time. In the time of Vespasian, Petilius Cerealis being appointed governor of Britain, attacked the Brigantes, defeated them in several battles, and reduced great part of their country. He was succeeded by Julius Frontinus; who not only maintained the conquests of his predecessor, but reduced entirely the warlike nation of the Silures. Frontinus was succeeded by the celebrated Cneius Julius Agricola, who completed the conquest of all the southern Britons. Just before the arrival of Agricola, the Ordovices had cut in pieces a band of horse stationed on their confines, after which the whole nation had taken arms. The summer was pretty far spent, and the Roman army was quite separated and dispersed, the soldiers having assured themselves of rest for the remaining part of the year. Agricola, however, was no sooner landed, than, having drawn together his legions, he marched against the enemy without delay. The Britons kept upon the ridges of the mountains; but Agricola led his troops in person up the tents. The Romans were victorious; and such a terrible slaughter was made of the Britons that almost the whole of the Ordovices were cut off. Without giving the enemy time to recover from the terror which this overthrow had occasioned, Agricola resolved upon the immediate reduction of Anglesey, which had been lost by the revolt of Voadicea. Being destitute of ships, he detached a chosen body of auxiliaries who knew the fords, and were accustomed to manage their arms and horses in the water. The Britons, who had expected a fleet and transports, were so terrified by the appearance of the Roman forces on their island, that they immediately submitted, and Anglesey was once more restored to the Romans. With the conquest of Anglesey ended the first campaign of Agricola; and he employed the winter in reconciling the Britons to the Roman yoke. In this he met with such success, through his wise policy, that the Britons began to prefer a life of security and peace, to that independency which they had formerly enjoyed, and which continually exposed them to the tumults and calamities of war. See AGRICOLA. His succeeding campaigns were attended with equal success; he not only subdued the 17 nations inhabiting England, but carried the Roman arms almost to the extremity

of Scotland. He also caused his fleet to sail round the island, and discovered the Orkney, or Orkney islands, which had before been unknown to the rest of the world. His expedition took him up about six years, and was completed A.D. 84.

(12.) ENGLAND, HISTORY OF, FROM JULIUS AGRICOLA'S CONQUESTS, TO THE DEPARTURE OF THE ROMANS. Had Agricola been continued in Britain, it is probable that both Scotland and England would have been permanently subdued; but he was recalled by Domitian in the year 84, and we are thence almost totally in the dark about the British affairs till the reign of Adrian. During this interval the Caledonians had taken arms, and ravaged the territories of the Britons who continued faithful to the Romans. Adrian abandoned to them the whole track lying between the Tyne and the Forth; but to restrain them from making incursions into the Roman territories, he built a wall 80 miles in length, from the river Eden in Cumberland to the Tyne in Northumberland. See ADRIAN. Under his successor Antoninus Pius, the Brigantes revolted; and the Caledonians, having in several places broken down Adrian's wall, began anew to ravage the Roman territories. Against them the emperor sent Lucius Urbicus, who reduced the Brigantes; and he defeated the northern nations, confined them within narrower bounds by a new wall, extending probably between the friths of Forth and Clyde.

ANTONINUS, § 4. From the time of Antoninus to that of Severus, the Roman dominions in Britain continued to be much infested by the incursions of the northern nations. That emperor divided Britain into two governments, the southern and northern; but the governor of the northern division was harassed by continual incursions of the Caledonians, that he was at length obliged to purchase a peace with money. The Caledonians held the treaty for 15 years; after which, breaking the Roman territories anew, they committed terrible ravages. Virius Lupus the governor, not being in a condition to withstand them, acquainted the emperor with his distress, intreating him to send powerful and speedy supplies. Upon this Severus resolved to put an end to the perpetual incursions of the enemy by making a complete conquest of the country; for which purpose he set out for Britain with his two sons Caracalla and Geta, at the head of a numerous army. The Caledonians, not having heard of his arrival, than they sent ambassadors offering to conclude a peace upon honourable terms. But these the emperor detained till he was ready to take the field, and then dismissed them without granting their request. As soon as the season was fit for action, Severus marched into Caledonia, where he put all to fire and sword. He advanced even to the most northerly part of the island; and though no battle was fought, through the continual ambushes of the Caledonians and the inhospitable nature of the country, he is said to have lost 50,000 men. At last the Caledonians sued again for peace; which was granted them on condition of their yielding part of the country, and delivering up their arms. After this the emperor returned to York, leaving Caracalla to command the army, and finish the new conquest between the friths of Forth and Clyde. But the emperor

emperor being taken ill at York, the Caledonians again took up arms. This provoked Severus to such a degree, that he commanded Caracalla to enter their country anew with the whole army, and to put all he met to the sword. Before these orders, however, could be put in execution, his two sons, having concluded a shameful peace with the Caledonians, returned to Rome. A long chasm now takes place in the history of the Roman dominions in South Britain. In the beginning of Dioclesian's reign, CARAUSIUS, a native of Gaul, passing over into Britain, took upon him the title of emperor, and was acknowledged by all the troops quartered here. He was, however, killed in a battle with one of Constantius's officers, after he had enjoyed the sovereignty for 6 or 7 years. Constantine the Great began his reign in this island; and returned soon after he had left it, probably with a design to put a stop to the daily incursions of the Caledonians. He altered the division of that part of Britain subject to the Romans. Severus had divided it into two provinces; (see BRITAIN, N° I, § 4.) but Constantine increased the number to three, viz. Britannia Prima, Secunda, and Maxima Cæsariensis; and this last was afterwards divided into two, viz. Maxima Cæsariensis and Flavia Cæsariensis. The removal of the imperial seat to Constantinople, gave the northern nations an opportunity of making frequent incursions into the Roman provinces; the emperor having carried with him, first into Gaul, and then into the East, not only most of the Roman troops, but likewise the flower of the British youth. About the end of the reign of Constantius II, the government of Britain and other western parts of the empire, was committed to Julian, afterwards emperor. While he was in his winter quarters at Eborac, he was informed that the Scots and Picts, about this time first distinguished by these names,) had broken into the Roman territories and committed dreadful ravages. Against them Julian dispatched a body of troops under the command of Flavius Valerius Maximianus. He embarked from Bologne in the eighth of winter, but was no sooner arrived at London than he was recalled; the enemy having probably appeased Julian by submission. Till the reign of Valentinian I. these nations still continued to infect the Roman territories in Britain, and had reduced the country to a most deplorable condition by their continual ravages. Valentinian sent against them Theodosius, father of Theodosius the Great. That general having divided his forces into several bodies, advanced against the Scots and Picts, who were obliged to yield to the superior discipline of the Romans. Great numbers were cut in pieces; and the rest were forced to abandon all their booty, and retire beyond the friths of Forth and Clyde. Theodosius then entered London in triumph, and restored that city to its former splendor, which had suffered greatly by the former incursions of the northern nations. To restrain them from breaking anew into the provinces, Theodosius built several forts between the two friths; and having thus recovered all the country between Adrian's wall and the friths, he formed of it a 5th province which he called VALENTIA. Though Britain was now in a state of temporary tranquillity, yet as the Ro-

man empire was daily declining, sufficient care could not be taken to secure such a distant province. In the reign of Honorius, the provincial Britons were annoyed not only by the Scots and Picts, but also by the depredations of the Saxons, on the sea coasts. By the care, however, of Stilicho, prime minister to Honorius, matters were once more settled, and a particular officer was appointed to guard the coast against the Saxons, with the title of *Comes limitis Saxonici*. But, not long after, the empire being over-run by barbarians, most of the Roman troops in Britain were recalled, and the country left quite open to the attacks of the Scots and Picts. Upon this the provincials expecting no more assistance from Honorius, resolved to set up an emperor of their own. Accordingly they invested with the imperial dignity one Marcus, an officer of great credit among them. Him they murdered in a few days, and placed on the throne Gratian, a native of Britain. After a reign of 4 months, Gratian underwent the fate of his predecessor; and was succeeded by CONSTANTINE, who was chosen merely for the sake of his name. He seems, however, to have been a man of some experience in war. He drove the Scots and Picts beyond the limits of the Roman territories; but being elated with this success, he would now be satisfied with nothing less than the conquest of the whole Roman empire. See CONSTANTINE, N° 14. He therefore passed over into Gaul, in 407, and took with him not only the few Roman forces that had been left, but such of the provincial Britons as were most accustomed to arms, leaving the rest entirely defenceless. Their enemies now broke into the country, and ravaged it with fire and sword; whereupon the Britons having repeatedly implored assistance from Rome without receiving any, resolved to withdraw their allegiance from an empire which was no longer able to protect them. Honorius himself applauded their conduct; and advised them by letters to provide for their own safety. The provincial Britons now regained their liberty; but had lost the martial spirit which at first rendered them so formidable to the Romans. They, however, met with some success in their first enterprises; for Zosimas tells us, that they delivered their cities from the insults of an haughty enemy. But being at last overpowered, they again had recourse to the Roman emperor, to whom they promised a most perfect submission, provided they were delivered from their merciless enemies. Honorius, touched with compassion, sent a legion to their relief. The Roman forces landed in Britain unexpectedly, and having destroyed great numbers of the Scots and Picts, drove them beyond the friths of Forth and Clyde. After this they advised the natives to build a wall on the isthmus from sea to sea; to reassume their courage, and defend themselves by their own valour. The Romans then quitted the country; being obliged to return, in order to repel those barbarians who had broken into the empire from all quarters. The Britons immediately set about building the wall with great alacrity. But as it was constructed only of turf, the Scots and Picts soon broke it down in several places; and, pouring in upon the effeminate provincials, committed

more cruel ravages than ever. At last, after many grievous calamities, the Britons sent ambassadors once more to Rome. These appeared with their garments rent and dust on their heads; and at last prevailed on the emperor, by their earnest intreaties, to send another legion to their relief. The troops arrived in Britain before the enemy knew of their having set sail. They were therefore quite unprepared. The Romans made a terrible havoc among them, and drove the remainder into their own country. As Honorius had sent them not with any ambitious view, but merely out of compassion to the unhappy provincials, the Romans told them, they had now no farther assistance to expect from them. They informed them, that the legion must immediately return to the continent, to protect the empire from the barbarians, who had extended their ravages almost to every part of it; and therefore, that they must now take their last farewell of Britain. After this declaration Gallio, the commander of the Roman troops, exhorted the Britons to defend themselves, by fighting bravely for their country, wives, and children, and what ought to be dearer than life itself, their liberty; telling them, at the same time, that their enemies were no stronger than themselves, provided they would exert their ancient courage and resolution. That they might the better withstand them, he advised them to build a wall of stone; offering to assist them with his soldiers, and to direct them himself in the execution. Upon this the Britons immediately fell to work; and with the assistance of the Romans, finished it in a short time, though it was no less than 8 feet thick, and 12 feet in height. It is thought to have been built on the same place where Severus's wall formerly stood. Towers were also built at convenient distances on the east coast, to prevent descents of the Saxons and other barbarians from Germany. Gallio employed the rest of his time in teaching the provincials the art of war. He left them patterns of the Roman weapons, which he also taught them to make; and, after many encouraging exhortations, he took his last farewell of Britain, to which the Romans never returned. There is a great disagreement among chronologers, as to the year in which the Romans finally abandoned Britain; some placing it in 422; others in 423, or 426; and some in 431, 435, or 437.

(13.) ENGLAND, HISTORY OF, FROM THE DEPARTURE OF THE ROMANS TO THE ERECTION OF THE SAXON HEPTARCHY. The final departure of the Romans was no sooner known to the Scots and Picts, than they poured in upon the provincial Britons, from all quarters, like hungry wolves breaking into a sheep-fold. When the Scots approached the new built wall, they found it completely finished, and guarded by great numbers of armed men. But so little had the provincial Britons profited by the military instructions of the Romans, that instead of placing proper guards, and relieving one another by turns, their whole number had staid several days and nights upon the ramparts without intermission. Being therefore quite benumbed and wearied out, they were able to make little resistance. Many were pulled down with hooks from the battlements, and dashed

in pieces. The rest were driven from their stations with showers of darts and arrows. They betook themselves to flight; but the Scots and Picts pursued them close, made a dreadful havoc among the fugitives, and took possession of the frontier towns, which were deserted by the inhabitants. As they now met with no more opposition, they over-ran the whole country. Their ravages soon occasioned a famine; and this was followed by a kind of civil war. The provincials, unable to support themselves, were obliged to plunder each other of the little the common enemy had left them. The whole country at last became so incapable of supporting those who were left in it, that many fled into the woods, in order to subsist by hunting. In this extremity of distress, they had once more recourse to the Romans; and wrote in the most mournful style that can possibly be imagined to Aetius, then consul. Their letter they directed thus: "The groans of the Britons to the consul Aetius." The contents of this letter were answerable to the direction. "The barbarians (say they) drive us to the sea; and the sea drives us back to the barbarians; between which we have only the choice of two deaths, either to be swallowed up by the waves, or to be cruelly sacrificed by the enemy." To this letter the Roman general gave no satisfactory answer, and the provincials were thereupon reduced to despair. Great numbers fled over to Armorica, where they settled along with others who had formerly gone over with an usurper called *Maximus*; while others submitted to the Scots and Picts. Some, however, more resolute than the rest, had once more recourse to arms. They sallied out in parties from the woods and caves where they had been obliged to hide themselves, and, falling unexpectedly on the enemy, cut great numbers of them in pieces, and obliged the rest to retire. Having thus obtained some respite, they began again to cultivate their lands; which now produced great sorts of corn in the greatest plenty. This plenty, according to Gildas, occasioned the utmost corruption of manners among all ranks of men. The clergy, says he, who should have reclaimed the laity by their example proved the ringleaders in every vice; being addicted to drunkenness, contention, envy, &c. It is not probable that this description was exaggerated by Gildas, who was himself a monk. But however this was, the Britons had not long enjoyed peace, when they were alarmed by a report, that the Scots and Picts were about to return with a far greater force than before, utterly to extirpate the name of the southern neighbours, and seize upon the country. This report threw them into a terrible consternation; and to add to their misfortunes, they were now visited by a dreadful plague, which raged with such violence, that the living were scarce sufficient to bury the dead. The contagion soon ceased than they were invaded by the Scots and Picts, who destroyed every thing with fire and sword. At this time the chief, if not the only, king of the southern division of Britain, was VORTIGERN. He is said to have been a cruel and bauched tyrant, regardless of the public welfare, and totally incapable of promoting it. Being aroused from his insensibility, however, by a few

of his own danger, he summoned a council of the chief men of the nation, to consult about the proper means for delivering the country from its calamities. In this council the most pernicious measure was adopted that could possibly have been resolved on; namely, to invite to their assistance the Saxons, a people famous for their piracies and ruelty, and justly dreaded by the Britons themselves. See SAXONS. This fatal expedient being greed upon, ambassadors were immediately dispatched into Germany; who, according to Witi-kind, a Saxon historian of the 9th century, made the following speech before an assembly of the Saxons.—“ Illustrious Saxons, the fame of your idories having reached our ears, the distressed Britons, harassed by the continual inroads of a neighbouring enemy, send us to implore your assistance. We have a fertile and spacious country, which we are commanded to submit to you. We are hitherto lived under the protection of the Roman empire; but our ancient masters having abandoned us, we know no nation more powerful than you, nor better able to protect us. We therefore recur to your valour. Forake us not in our distress, and we shall readily submit to what you yourselves shall think fit to prescribe to us.”—If this object and shameful speech was realized, it must give us a very strange idea of the national spirit of the South Britons at that time. It perhaps the whole is a fiction, invented to excite the perfidious treatment which the Britons afterwards received from the Saxons. The most specdable even of the Saxon historians make no mention of such a speech; and it is certain, that when the Saxons themselves wanted to quarrel with the Britons, they never insisted upon the promise made by the British ambassadors; which they certainly would have done, had any such promise been made. The British ambassadors were very favourably received by the Saxons. The latter embraced their proposals with joy; and their ambassadors foretold that they should plunder their British allies for 150 years; and reign over them twice that time. Three long ships, were therefore fitted out, under the conduct of HENGIST and HORSA, two brothers much celebrated for their valour. They were sons of Witigisl, said to be great-grandson to the Saxon god Woden; a circumstance which added much to their authority. Having embarked about 1600 men on board of three vessels, the two brothers arrived in the Isle of Thanet, in 449, or 450. They were received by the inhabitants with the greatest demonstrations of joy: the Isle in which they had landed was immediately appointed for their habitation; and a league was concluded, in virtue of which the Saxons were to defend the provincial Britons against all foreign enemies; and the provincials were to allow the Saxons pay and maintenance, besides the place allotted them for their habode. Soon after their arrival, king Vortigern sent them against the northern nations, who had lately broke into the kingdom, and advanced as far as Stanford, in Lincolnshire. Here a battle was fought, in which the Scots and Picts were utterly defeated. Vortigern was so highly pleased with his new allies, that he bestowed large possessions upon Hengist and Horfa. It is said, that, even

at this time, Hengist was taken with the wealth and fertility of the country; and that observing the inhabitants to be quite enervated with luxury, he began to entertain hopes of conquering part of it. He therefore, with Vortigern's consent, invited over more of his countrymen, informing them of the fruitfulness of the country, the effeminacy of the inhabitants, and how easily a conquest might be effected. The Saxons readily complied, and in 452, as many more arrived in 17 vessels, as, with those already in Britain, made up 5000 men. Along with these came over Rowena the daughter of Hengist. Vortigern fell in love with this lady; and to obtain her in marriage, divorced his queen. Hengist pretended to be averse to the match; but Vortigern obtained his consent by investing him with the sovereignty of Kent. Vortigern had as yet continued in friendship with the Saxons, and even put more confidence in them than in his own subjects. For, not long after the arrival of this reinforcement, Hengist obtained leave to send for a second, in order, as was pretended, to defend the king from the attempts of his rebellious subjects. These embarked in 40 ships, under the command of Osta and Ebula, the son, or brother, and nephew of Hengist. They landed at the Orkney islands; and having ravaged them, and all the northern coasts of Scotland, they conquered several places beyond the Frith, and at last obtained leave to settle in Northumberland. The pretence for this settlement was, that the Saxons under Osta and Ebula might defend the northern frontiers of the kingdom, as those under Hengist and Horfa did the southern parts. Many more Saxons were, under various pretences, invited over: till at last, their numbers being greatly increased, they began to quarrel with the natives. They demanded larger allowances of corn and other provisions; threatening to lay waste the whole country if their demands were not complied with. The Britons, instead of complying, desired them to return home, since their numbers exceeded what they were able to maintain. Upon this the Saxons concluded a peace with the Scots and Picts; and turning their arms against the unhappy Britons, over-ran the whole country, committing every where the greatest cruelties. All buildings whether public or private, they levelled with the ground. The cities were pillaged and burnt; and the people massacred without distinction of sex or age, and that in such numbers, that the living scarce sufficed to bury the dead. Those who escaped took refuge among inaccessible rocks and mountains, where they either perished with hunger, or were forced to surrender as slaves to their enemies. Some crossed the sea and settled in Holland, and Armorica in Gaul. Vortigern was so far from being reclaimed by these calamities, that he added incest to his other crimes, and married his own daughter. At last, his own subjects, provoked at his enormous wickedness, and the partiality he showed to the Saxons, deposed him, and raised his son VORTIMER to the throne. He was a young man of great valour, and willingly undertook the defence of his distressed country. He first fell upon the Saxons, and drove them into the Isle of

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Thanet;

Thanet, where he besieged them, till being reinforced by fresh supplies, they opened a way thro' the British troops. Vortimer, however, engaged them, on the banks of the Derwent, in Kent, where he obtained a complete victory. Another battle was fought at Alesford, in which Horsa the brother of Hengist was killed. A 3d battle was fought, in which the victory was uncertain, as is also the place where it happened. The 4th battle, however, according to Nennius, proved decisive in favour of the Britons. Vortimer engaged his enemies, according to some, at Folkstone; according to others, at STONAR, in the isle of Thanet. The Saxons were defeated with great slaughter, and driven back to their ships. So complete is the victory said to have been, that the Saxons quitted the island, without making any attempt on it for five years afterwards. These battles, however, rest entirely upon the credit of Nennius, and the historians who have followed him. They are taken notice of neither by Gildas nor Bede. The former, indeed, acquaints us that the Saxons retired. This, by most historians, is understood of their returning home; though he might mean no more, than that they retired into Kent and Northumberland. Vortimer died after a reign of six years, and Hengist no sooner heard of his death, than he invaded Britain anew with a numerous body of Saxons. He was opposed by Vortigern, who had been restored on the death of his son. Several battles were fought, but at last the Britons being overthrown at a place called *Crecaanford*, with the loss of 4000 men, were obliged to abandon Kent, and retire to London. This happened about A. D. 458 or 459: from this time most historians date the erection of the Saxon kingdom in Britain, viz. that of KENT. Hengist assumed the title of *king*, and chose Elk his son for his colleague. The Britons under Vortigern still continued the war. Hengist finding himself unable to gain a decisive advantage over them in the field, had recourse to treachery. He pretended to be desirous of concluding a peace with the British monarch, and of renewing his ancient friendship with him; and therefore requested an interview. To this Vortigern readily consented, and accepted an entertainment prepared for him by Hengist. The king was attended by 300 nobility all unarmed, but the Saxons had concealed daggers below their garments. The British nobility were all treacherously massacred in the height of their mirth; Vortigern himself was taken and put in fetters; nor could his liberty be procured, but by ceding to the Saxons those provinces now called *Essex*, *Sussex*, and *Middlesex*. Thus the Saxons got such a footing in Britain that they could never afterwards be expelled. Vortigern, after being set at liberty, is said to have retired to a vast wilderness near the fall of the Wye in Radnorshire, where he was some time after consumed by lightning, together with a city, called *Kaer Vortigern*, which he had built at that place. On the retreat of Vortigern, the command of the British forces devolved upon AURELIUS AMBROSIVS, who gained several victories over the Saxons. See AMBROSIVS. Notwithstanding this, they still continued to gain ground; and in 491, the

foundation of a second Saxon kingdom was laid in Britain. This at first comprehended only the county of Sussex, but soon after extended over most of the countries lying south of the Humber. It was called the kingdom of the *South Saxons*. The German nations being informed of the success of the Saxons in Britain, new adventurers daily flocked over. They were chiefly of three nations, Saxons, Angles, and Jutes. All these passed under the common appellation sometimes of *Saxons*, sometimes of *Angles*. They spoke the same language, and agreed very much in their customs, so that all of them naturally combined against the natives. The most active of these adventurers was Cerdic a Saxon, said to be the tenth descendant from Woden. He landed with his son Ceric, and as many men as he could convey in his ships, at Yarmouth in Norfolk. The Britons immediately attacked him with great vigour; but after a short engagement, they were totally defeated. Many other battles were fought, the event of which was always favourable to the Britons, so that the Britons were forced to abandon their coasts to them. In 497, PORTA, another Saxon, with his two sons *Bieda* and *Mazla*, a fresh body of Saxons, arrived at *Portsmouth*, named from this chieftain. The Britons attempted to oppose their landing, but were defeated with great slaughter; after which PORTA made himself master of all the neighbouring coasts. The progress of Cerdic, however, alarmed the Britons more than that of all the other Saxon princes. About the year 508, therefore, NAZLEOD, styled, by Henry of Huntingdon, the greatest of all the British kings, assembled almost the whole strength of the South Britons to drive him out of the island. Cerdic on the other hand took care to strengthen himself by procuring assistance from all the Saxons already in the island. He then advanced against the Britons, commanding his right wing himself, and his son Ceric the left. As the two armies drew near each other, NAZLEOD perceived the enemy's right wing to be much stronger than the left. He therefore attacked with the flower of his army; and after an obstinate resistance, obliged Cerdic to save himself by flight. But being too eager in the pursuit, Ceric fell upon his rear; and the British army was entirely defeated; and 5000 men, among whom was NAZLEOD himself, were left dead on the field. Who succeeded NAZLEOD is not known. The Welsh annals leave an interregnum of about 10 years; after which they place the beginning of the reign of ARTHUR, the most renowned of our ancient princes. The history of king ARTHUR is much obscured by absurd, romantic, and ridiculous fables, that some have supposed that no person ever existed. But a decisive proof of his existence is, that his tomb was discovered at Glastenbury in Somersetshire, and his coffin dug up in the reign of Henry II. See ARTHUR, § 3. The renowned prince is said to have defeated the Saxons under Cerdic in 12 pitched battles. The last of them was fought on Badon hill, (supposed to be *Badfdown* near Bath), in which the Saxons received such a terrible overthrow, that for many years they gave the Britons no further molestation.

saw supplies of Saxons, however, were continually flocking over, a 3d and 4th kingdom of men were soon formed. The 3d kingdom comprehended the counties of Devon, Dorset, Somersetshire, Hampshire, and Berkshire; to which afterwards added Cornwall. This was called *the kingdom of the West Saxons*. The other kingdom, which was called *the kingdom of the East Saxons*, comprehended Essex, Middlesex, and part of Hertfordshire. In 542, king Arthur was mortally wounded fighting with his treacherous nephew, Mordred, whom he killed on the spot. Five years afterwards, the Saxon kingdom of Northumbria was erected. It extended much farther at the present bounds of that county; for it comprehended all Yorkshire, Lancashire, Durham, Cumberland, Westmoreland, and Northumberland, with part of Scotland, as far as the frith of the Forth. Between these Saxon kings frequent contentions now arose, by which means the Britons enjoyed an uninterrupted tranquillity for at least 100 years. The 6th Saxon kingdom, called that of *the East Angles*, was founded in 575, and comprehended the counties of Norfolk, Suffolk, Cambridgeshire, and the Isle of Ely. The Saxons once more attacked the Britons, and overthrew them in many battles. The war was continued for ten years; at which, the 7th Saxon kingdom, called *Mercia*, was set up. It comprehended 17 counties, viz. Gloucestershire, Hereford, Worcester, Warwick, Leicestershire, Rutland, Northampton, Lincoln, Huntingdonshire, Bedford, Buckingham, Oxford, Staffordshire, Shropshire, Cheshire, and part of Hertfordshire. The Britons were now pressed within very narrow bounds. However, they entirely gave up the best part of their country to their enemies, they once more resolved to try the event of a battle. At this time they were assisted by the Angles, who were jealous of the overgrown power of the West Saxons. The battle was fought in Wiltshire, at Woden's Beornth, near the ditch called *Wansdike* or *Wodenfild*; which runs through the middle of the county. The battle was very obstinate and bloody; at last the Saxons were entirely defeated, and lost their whole army cut off. The victory, however, proved of little service to the Britons: being greatly inferior in number to the Saxons, they were harassed by them on the one side, and by the Scots and Picts on the other, they were daily more and more confined; and at last obliged to take refuge among the craggy and mountainous rocks in the west of the island, where their enemies could not pursue them. At first they possessed all the country beyond the rivers Dee and Mersey, which anciently divided Cambria, or Wales, from England; the towns which stand on the eastern banks of these rivers having mostly been obliged to restrain the incursions of the Welsh. But the Anglo-Saxons having passed the Severn, by which they seized on the country lying between that river and the Wye. Nay, some parts even of Flintshire and Denbighshire were subject to the king of Mercia: for Uffa, the most powerful king that country, caused a deep ditch to be drawn, and a high wall built as a barrier between his dominions and the territories of the Welsh, from the mouth of the Dee, a little above Flint Castle,

to the mouth of the Wye. This ditch is still to be seen in several places; and is called by the Welsh *Claudh Uffa*, or the ditch of Uffa. The inhabitants of the towns on the east side of this ditch are called by the same people *Guyr y Mers*; that is, the men of Mercia. Thus, after a violent contest of near 150 years, the Saxons entirely subdued the Britons whom they had come to defend, and erected 7 independent kingdoms, commonly called the *Saxon Heptarchy*.

(14.) ENGLAND, HISTORY OF, FROM THE ERECTION OF THE HEPTARCHY, TO THAT OF THE ENGLISH MONARCHY, UNDER EGBERT. South Britain, which now began to be called *Anglia*, or *England*, from the *Angles*, (See *Angles*, N° 1.) was soon reduced by its Saxon conquerors to a degree of barbarity, almost as great as it had been in, when first invaded by the Romans. The provincial Britons, during their subjection to that people, had made considerable advances in civilization. They had built 28 considerable cities, besides a number of villages and country seats; but now these were all levelled with the ground, the native inhabitants were reduced to the most abject slavery, and every art and science totally extinguished among them. Before these fierce conquerors could be civilized in any degree, it was necessary that all the 7 kingdoms should be reduced under one head; for as long as they remained independent, their continual wars with each other still kept them in the same state of barbarity and ignorance. The history of these seven kingdoms affords very little interesting. It consists only of a detail of their quarrels for the sovereignty. This was at last obtained by Egbert king of the West Saxons, in Wessex, in 827. Before this time, Christianity had been introduced into almost all the kingdoms of the heptarchy; and however much corrupted it might be by coming through the impure channel of the church of Rome, and misunderstood through the ignorance of those who received it, it had considerably softened the barbarous manners of the Saxons. It had also opened a communication between Britain and the more polite parts of Europe, so that there was now some hope of the introduction of arts and sciences into this country. Another effect was, that, by the ridiculous notions of the merit of preserving inviolable chastity even between married people, the royal families of most of the kingdoms were totally extinct; and the people being in a state of anarchy, were ready to submit to the first who assumed any authority over them. All these things contributed to the success of Egbert in uniting the heptarchy under his own dominion. He was of the royal family of Wessex; and a nearer heir than Brithric, who had been raised to the kingdom in 784. As Egbert was a prince of great accomplishments, Brithric, knowing that he had a better title to the crown than himself, began to look upon him with a very jealous eye. Young Egbert, sensible of his danger, privately withdrew to France; where he was well received by Charlemagne, the reigning monarch. The French were reckoned at this period the most valiant and polite people in Europe; so that this exile proved of great service to Egbert. He continued at the court of France till he was recalled by

by the nobility to take possession of the kingdom of Wessex. This recal was occasioned by the following accident. Brithric the king of Wessex had married Eadburga, natural daughter of Uffa king of Mercia; a woman infamous for cruelty and incontinence. Having great influence over her husband, she often persuaded him to destroy such of the nobility as were obnoxious to her; and where this expedient failed, she herself had not scrupled to become their executioner. She had mixed a cup of poison for a young nobleman, who had acquired a great share of her husband's friendship: but, unfortunately, the king drank of the fatal potion along with his favourite, and soon after expired. By this and other crimes Eadburga became so odious to the people, that she was forced to fly into France, whence Egbert was at the same time recalled, as above mentioned. Egbert ascended the throne of Wessex in 799. He was the sole descendant of those conquerors who first invaded Britain, and who pretended to derive their pedigree from the god Woden. But though this circumstance might have given him great advantages in attempting to subdue the neighbouring kingdoms, Egbert for some time gave them no disturbance; but turned his arms against the Britons in Cornwall, whom he defeated in several battles. He was recalled from his conquests in that country, by hearing that Bernulf king of Mercia had invaded his dominions. Egbert quickly led his army against the invaders, whom he totally defeated at Ellendun in Wiltshire. He then entered their kingdom on the side of Oxfordshire with an army, and at the same time sent his eldest son Ethelwolf with another into Kent. The young prince expelled Baldred the tributary king of Kent, and soon made himself master of the country. The kingdom of Essex was conquered with equal ease; and the East Angles, who had been subjected by the Mercians, joyfully put themselves under the protection of Egbert. Bernulf himself marched against them, but was defeated and killed; and Ludecan his successor met with the same fate two years after. These events facilitated the reduction of Mercia. Egbert gained an easy victory over a dispirited and divided people; but to engage them to submit with the less reluctance, he allowed Wiglaf, their countryman, to retain the title of *king*, whilst he himself exercised the real power of a sovereign. Northumberland was in a state of anarchy; and this tempted Egbert to carry his victorious arms into that kingdom also. The inhabitants, being desirous of living under a settled form of government, readily submitted, and owned Egbert for their sovereign, who thus became the first monarch of England.

(15.) ENGLAND, HISTORY OF, FROM THE ERECTION OF THE MONARCHY, TO ITS ESTABLISHMENT UNDER ALFRED. Egbert became sole master of England about the year 827. A favourable opportunity was now offered to the Anglo-Saxons of becoming a civilized people, as they were at peace among themselves, and seemed free from any danger of a foreign invasion. But this flattering prospect was soon overcast. Five years after Egbert had established his new monarchy, the Danes plundered the isle of Shepey, and made their escape with safety. Encouraged by this suc-

cess, next year they landed from a fleet of 11 ships. They were encountered by Egbert at Charmouth in Dorsetshire. The battle was obstinate and bloody. Great numbers of the Danes were killed, but the rest made good their retreat to their ships. They next entered into an alliance with the Britons of Cornwall; and landing two years after in that country, they made an invasion into Devonshire. Egbert met them at Hagesdown, and totally defeated them; but before he had time to form any regular plan for the defence of the kingdom, he died, and left the government to his son Ethelwolf. The new king was weak and superstitious. He began with dividing the kingdom, which had so lately been united, with his son Athelstan. To the young prince he gave the counties of Essex, Kent, and Suffex. But though this division might have been productive of bad consequences at another time, the fear of the Danes kept every thing quiet in the present. These barbarous murderers, impelled by the hopes of plunder, scarce ever failed paying England an annual visit. The English historians tell us, that they met with many severe pulses; but on the whole they had gained ground; for, in 851, a body of them took up their quarters in England. Next year they received strong reinforcement of their countrymen in vessels; and advancing from the isle of Thanet where they had stationed themselves, they besieged London and Canterbury. Having next put to flight Brichtric the governor of Mercia, they marched into the heart of Surry, laying waste the whole country through which they passed. Ethelwolf though naturally little fitted for military enterprises, was now obliged to take the field. He marched against the Danes at the head of the West Saxons, and gained an indecisive and bloody victory over his enemies. The Danes still maintained their settlement in the isle of Thanet. They were attacked by Ealher and Hudda, governors of Kent and Surry; both of whom they defeated and killed. Afterwards they removed to the isle of Shepey, where they took up their winter quarters with a design to extend their ravages the next year. This deplorable state of the kingdom did not hinder Ethelwolf from making a pilgrimage to Rome, whither he carried his 4th and favourite son Alfred, then only six years of age. He passed a year in that city; made presents to the principal ecclesiastics there; and made a grant of 7 manucuses, (about 371. 10 sh. sterl.) annually to the see of Rome. See MANCUS. In his return to England, Ethelwolf married Judith, daughter of the emperor Charles the Bald; but when he landed, he found himself deprived of his kingdom by his son Ethelbald. That prince assumed the government of Athelstan's dominions, who was lately dead; and, with many of Ethelwolf's nobles, formed a design of excluding him from the throne altogether, on account of his weaknesses and infirmities. Ethelwolf, however, prevented these calamities of a civil war, by dividing the kingdom with his son. He gave to Ethelbald the government of the western, and reserved to himself the government of the eastern part of the kingdom. Immediately after this he summoned the states of the kingdom, and conferred on the clergy a perpetual donation

tythes, for which they had contended for several centuries. This concession was deemed so venial by the English, that they now thought themselves sure of the favour of heaven; and therefore neglected to use the natural means for their safety which they might have done. They even freed, that, notwithstanding the desperate situation of affairs, the revenues of the church should be exempted from all burdens, and even from those imposed for the immediate defence of the nation. Æthelwulf died two years after, and left the kingdom to his two eldest sons Ethelbald and Ethelred. Both these princes died in a few years, and the kingdom to Ethelred I. their brother, in the year 866. The whole of Ethelred's reign was troubled by the irruptions of the Danes. The king defended himself with great bravery, being aided in all his military enterprises by his brother Alfred. In this reign, the Danes first landed on the East Angles; who treacherously entered into an alliance with them, and furnished them with horses, to make an irruption into Northumbria, where they seized upon York. Osbert, Ælla, two Northumbrian princes who attempted to rescue the city, were defeated and slain. Encouraged by this success, the Danes entered into Mercia, took up their winter quarters at Nottingham, and thus threatened the kingdom with a total subjection. From this time, however, they were dislodged by Ethelred and Alfred, who forced them to retire into Northumbria. Their restless disposition, however, did not suffer them to continue long in one place. They broke into East Anglia; defeated and took prisoner Edmund the tributary king, whom they afterwards murdered; and committed everywhere the most barbarous ravages. In 871, they advanced to Reading; from whence they invaded the neighbouring country by their incursions. The Mercians, desirous of recovering their pendency, refused to join Ethelred with their king; so that he was obliged to march against the Danes, attended only by the West Saxons, who were his hereditary subjects. Several actions followed, in which the Danes were said to be unsuccessful; but being continually reinforced from their own country, they became every day more formidable to the English. During the action and distress in which the nation was now daily involved, king Ethelred died of a sudden, and he had received in an action with the Danes; and left to his brother Alfred the kingdom almost totally subdued by a foreign power. Alfred ascended the throne in 871, being then only nine years of age. His great virtues and shining talents saved his country from ruin, which seemed almost unavoidable. His exploits against the Danes, his dangers and distresses, are related under the article ALFRED. Having settled the nation in such a manner, that he may be justly esteemed the founder of the monarchy, as well as the free constitution of England, he died in 899, leaving the kingdom to his second son EDWARD the Elder.

16.) ENGLAND, HISTORY OF, FROM THE ESTABLISHMENT OF THE MONARCHY, TO THE CONQUEST BY THE DANES AND NORWEGIANS. The beginning of Edward's reign was disturbed

by those intestine commotions from which the wife and politic Alfred had taken so much pains to free the nation. Ethelwald, son to king Ethelbert, claimed a right to the throne, and took possession of Winburne, where he seemed determined to hold out to the last extremity. On the approach of Edward, however, with a powerful army, he first fled into Normandy, and afterwards into Northumberland, where the Danes, lately subdued by Alfred, but very impatient of peace, readily declared for him. Ethelwald, having thus connected himself with the Danish tribes, went to Denmark, whence he returned with a great body of these banditti, and was joined by the Danes of East Anglia and Mercia. He made an irruption into Gloucester, Oxford, and Wilts; and having ravaged the country, retired with his booty before the king could approach him. Edward revenged himself, by leading his forces into East Anglia, and ravaging it in like manner. He then gave orders to retire; but the Kentish men, greedy of more plunder, staid behind, and took up their quarters at Bury. Here they were assailed by the Danes; but the Kentish men made such an obstinate defence, that though their enemies gained the victory, it was bought by the loss of their bravest men, and, among the rest, of the usurper Ethelwald himself. The king, now freed from the attempts of so dangerous a rival, concluded an advantageous peace with the East Angles. He next set about reducing the Northumbrians, and for this purpose equipped a fleet. The Northumbrians, thinking the whole of Edward's forces were embarked on board his fleet, entered his territories with all the troops they could raise. The king, however, was better prepared than they expected. He attacked them on their return at Tettenhall, in Staffordshire, put them to flight, recovered the booty, and pursued them with great slaughter into their own country. The rest of Edward's reign was a scene of continued and successful action against the Northumbrians, East Angles, the Danes of Mercia, and others from Denmark. He put his kingdom in a good posture of defence, by fortifying Chester, Eddisbury, Warwick, Cheshire, Buckingham, Towcester, Maldon, Huntingdon, and Colchester. He vanquished Thorketil a Danish chieftain, and obliged him to retire with his followers into France. He subdued the East Anglians, Northumbrians, and several tribes of the Britons; and even obliged the Scots to make submissions. He died in 925, and was succeeded by Athelstan his natural son. This prince ascended the throne without much opposition, as the legitimate children of Edward were too young to rule a nation so much liable both to foreign invasions and domestic troubles as England then was. One Alfred, however, a nobleman of considerable power, entered into a conspiracy against him. It is said, that this nobleman was seized upon strong suspicions, but without any certain proof. He offered to swear to his innocence before the pope; and in those days it was supposed that none could take a false oath in presence of such a sacred person, without being visited by an immediate judgment from God. Alfred was accordingly conducted to Rome, and took the oath required of him before pope John X.

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The words were no sooner pronounced, than he fell into convulsions, of which he expired in three days. The king, fully convinced of his guilt, confiscated his estate, and made a present of it to the monastery of Malmesbury. This accident proved the means of establishing the authority of Athelstan in England. But finding the Northumbrians bore the English yoke with impatience, he gave Sithric, a Danish nobleman, the title of king of Northumberland; and to secure his friendship, gave him his own sister Editha in marriage. This was productive of bad consequences. Sithric died the year after his marriage with Editha; upon which Anlaf and Godfrid, Sithric's sons by a former marriage, assumed the sovereignty without waiting for Athelstan's consent. They were, however, soon obliged to yield to the superior power of that monarch. The former fled to Ireland; and the latter to Scotland, where he was protected by king Constantine III, who was importuned by Athelstan to deliver up his guest, and even threatened with an invasion if he did not comply. Constantine, detesting such treachery, advised Godfrid, (or as Mr Heron styles him, *Godfert*;) to make his escape. He did so, turned pirate, and died soon after. Athelstan, resenting this conduct of Constantine, invaded Scotland, and reduced him, it is said, so low, that he was obliged to make the most humble submissions. This, however, is denied by all the Scottish historians. Constantine, after the departure of Athelstan, entered into a confederacy with Anlaf, who subsisted by his piracies, and with some of the Welsh princes who were alarmed at the increase of Athelstan's power. All these confederates made an irruption into England at once; but Athelstan meeting them at Brunanburgh, or Brumbury in Northumberland, gave them a total overthrow. Anlaf and Constantine made their escape with difficulty, leaving the greatest part of their men dead on the field of battle. After this period, Athelstan enjoyed his crown in tranquillity. He passed a remarkable law, for the encouragement of commerce; viz. that a merchant who had made 3 long voyages on his own account, should be admitted to the rank of athane or gentleman. Athelstan died in 941, after reigning 16 years, and was succeeded by his brother Edmund I. On his accession, he found the kingdom disturbed by the restless Northumbrians, who were, however, soon reduced; and Edmund ensured the peace of the kingdom, by removing the Danes from Mercia, where they had been allowed to settle, as he found they took every opportunity to introduce foreign Danes into the kingdom. He also conquered Cumberland from the Britons. This country, however, he bestowed upon Malcolm king of Scotland, upon condition that he should do homage for it, and protect the north of England from all future incursions of the Danes. Edmund was unfortunately murdered in Gloucester by one Leolf a notorious robber. This man had been formerly sentenced to banishment; yet had the boldness to enter the hall where the king himself dined, and to sit at table with his attendants. Edmund immediately ordered him to leave the room. The villain refused to obey; upon which the king leaped upon him, and seized him by the hair. Leolf

then drew a dagger, and gave the king a wound, of which he instantly died, A.D. 946, in the 6th year of his reign. As the children of Edmund were too young, his brother Edred succeeded to the throne. The beginning of his reign, as well as those of his predecessors, was disturbed by the rebellions and incursions of the Northumbrian Danes. On the appearance of Edred with an army, however, they immediately submitted; but before the king withdrew his forces, he laid waste their territories by way of punishment. He was no sooner gone, than they rose in rebellion a second time. They were again subdued; and the king took effectual precautions against their future revolts, by placing English garrisons in all the towns, and appointing an English governor to watch their motions, and suppress their insurrections on the first appearance. In the reign of Edred, the celibacy of the clergy began to be pressed up under the patronage of DUNSTON, a pretended saint had obtained such an ascendancy over Edred, who was naturally superstitious, that he not only directed him in affairs of conscience, but in the most important matters of state. He was placed at the head of the treasury; and he thus possessed of great power at court, he was able to accomplish the most arduous undertakings. He professed himself a partisan of the monastic rules; and having introduced order among the monks of Glasterbury and Abingdon, he endeavoured to render it universal among the clergy throughout the kingdom. The monks generally embraced the pretended reformation, under which they inveighed bitterly against the luxury of the age. When other topics of conversation were wanting, the marriages of clergymen became a sure object of invective. Their wives received the appellation of *concubines*, some other more opprobrious name. The laity, on the other hand, who were numerous and rich, defended themselves with vigour, and endeavoured to retaliate upon their adversaries. The people were thrown into the most violent ferment; but the monks, being patronised by Edred, gained ground greatly upon their opposers. Their progress, however, was somewhat retarded by the king's death, which happened in 955, after a reign of 9 years. He left children; but as they were infants, his nephew Edwy, son to Edgar, was placed on the throne. The new king was not above 16 or 17 years of age, at his accession. His reign is only remarkable for the tragical death of his queen ELGIVA. She was a princess of royal blood, with whom Edwy was deeply enamoured. She was his 2d or 3d cousin, and therefore within the degrees of affinity prohibited by the canon law. Edwy, however, hearkened only to the dictates of his passion, married contrary to the advice of the more dignified ecclesiastics. The monks on this occasion were particularly violent; and therefore Edwy determined not to second their ambitious projects. He soon found reason to repent his having provoked such dangerous enemies. On his coronation, while his nobility were indulging themselves in riotous mirth in a great hall where they had assembled, Edwy withdrew to another apartment to enjoy the company of his beloved queen

mother. Dunstan guessed the reason of his silence. With unparalleled impudence, he burst to the queen's apartment; and upbraiding Edwy with his lasciviousness, as he termed it, pushed him back to the hall where the nobles were assembled. The king determined to resent such a public insult. He required from Dunstan an account of the administration of the treasury during the late reign. The monk, probably unable to give a just account, refused to give any; upon which Edwy accused him of malversation in his office, and banished him the kingdom. This proved the worst step that could possibly have been taken. Dunstan was no sooner gone than the sole nation was in an uproar about his *sanctity* and the king's *impiety*. These clamours, as they had been begun by the clergy, so they were kept up and increased by them, till at last they proceeded to the most outrageous violence. Abp. Odo sent a party of soldiers to the palace. They seized the queen, and burned her face with a red-hot iron, in order to destroy her beauty by which she had enticed her husband; after which they carried her by force into Ireland, there to remain in perpetual exile. The king, finding it in vain to resist, was obliged to consent to a divorce from which was pronounced by Abp. Odo. A prophetic still more dismal awaited Elgiva. She had been cured of her wounds, and had even used means to efface the scars with which her persecutors had hoped to destroy her beauty. She came to England, with a design to return to the king, whom she still considered as her husband. Unfortunately, however, she was intercepted by a party of soldiers sent for that purpose to the primate. Nothing but her most cruel persecutors could now satisfy that wretch and his accomplices. She was hamstrung at Gloucester, and expired in a few days. The minds of the nobles were at this time so much sunk in superstition, that the monstrous inhumanity above mentioned was called a judgment from God upon Edwy and his spouse for their dissolute life, *i. e.* their mutual love to each other. They even proceeded to rebellion against their sovereign; and having seized to the throne Edgar, the younger brother of Edwy, at that time only 13 years of age, they put him in possession of Mercia, Northumbria, and East Anglia. Edwy being thus confined to the southern counties, Dunstan returned, and took upon him the government of Edgar and his party; but the death of Edwy soon removed all difficulties, and gave Edgar peaceable possession of the government.—The reign of EDGAR proved one of the most fortunate mentioned in the English history. He took the most effectual measures both for preventing tumults at home and wars from abroad. He quartered a body of disciplined troops in the north, to repel the incursions of the Scots, and to keep the Northumbrians in awe. He built a powerful navy; and that he might keep the seamen in the practice of their duty, as well as present a formidable armament to his enemies, he commanded the fleet from time to time to make the circuit of his dominions. The greatness of Edgar, which is very much celebrated by the English historians, was owing to the harmony which reigned between him and his subjects; and

the reason of this good agreement was, that the king sided with Dunstan and the monks, who had acquired a great ascendancy over the people. He enabled them to accomplish their favourite scheme of dispossessing the secular canons of all the monasteries; and he consulted them not only in ecclesiastical, but also in civil affairs. On these accounts, he is celebrated by the monkish writers with the highest praises; though it is plain, from some of his actions, that he was a man who could be bound neither by the ties of religion nor humanity. He broke into a convent, and carried off by force and ravished a nun called *Editha*. His spiritual instructor, Dunstan, for this offence, obliged the king, not to separate from his mistress, but to abstain from wearing his crown for 7 years! Edgar, however, was not to be satisfied with one mistress. He happened once to lodge at the house of a nobleman who had a very beautiful daughter. Edgar, enamoured at the sight of the young lady, without ceremony asked her mother to allow her to pass a night with him. She promised compliance; but secretly ordered a waiting maid named, *Elfrida*, to steal into the king's bed when the company were gone, and to retire before day-break. Edgar, however, detained her by force, till day-light discovered the deceit. His love was now transferred to the waiting maid; who became his favourite mistress, and maintained a great ascendancy over him till his marriage with Elfrida. The circumstances of this marriage were still more criminal than those above mentioned. Elfrida was daughter and heiress to Olgar Earl of Devonshire. She was a person of such exquisite beauty, that her fame was spread all over England, though she had never been at court. Edgar's curiosity was excited by the accounts he had heard of her, and therefore he formed a design of marrying her. He communicated his intention to Earl Athelwold his favourite; and ordered him, on some pretence or other, to visit the Earl of Devonshire, and bring him a certain account concerning Elfrida. Athelwold went as he was desired; but fell so deeply in love with the lady himself, that he resolved to sacrifice his fidelity to his passion. He returned to Edgar, and told him, that Elfrida's charms were by no means extraordinary, and would have been totally overlooked in a woman of inferior station. After some time, however, turning the conversation again upon Elfrida, he told the king that he thought her parentage and fortune made her a very advantageous match; and therefore, if the king gave his consent, he would make proposals to the Earl of Devonshire on his own behalf. Edgar consented, and Athelwold was married to Elfrida.—After his marriage he used his utmost endeavours to keep his wife from court, that Edgar might have no opportunity of observing her beauty. The king, however, was soon informed of the truth; and told Athelwold that he intended to pay him a visit in his castle, and be made acquainted with his new-married wife. The Earl could make no objections; only he desired a few hours to prepare for the visit. He then confessed the whole to Elfrida, and begged of her to appear before the king as much to the disadvantage as possible. Instead of this, she dressed herself to the greatest advantage. Edgar immediately con-

ceived a violent passion for her; and, to gratify it, seduced Athelwold into a wood under pretence of hunting, where he stabbed him with his own hand, and afterwards married his widow. The reign of this tyrant, however, is remarkable for the encouragement he gave to foreigners. These foreigners, it is alleged, corrupted the former simple manners of the nation. Of this simplicity, however, there seems to be no great reason to boast; seeing it could not preserve them from treachery and cruelty, the greatest of all vices: so that their acquaintance with foreigners was certainly an advantage to the people, as it tended to enlarge their views, and cure them of those illiberal prejudices and rustic manners to which islanders are often subject. Another remarkable incident, is the extirpation of wolves from England. The king took great pleasure in hunting and destroying these animals himself. At last he found that they had all taken shelter in the mountains and forests of Wales. Upon this he changed the tribute imposed upon the Welsh princes by Athelstan, into an annual tribute of 300 wolves heads; and this produced such diligence in hunting them, that they were at last totally exterminated. Edgar died in 958, after a reign of 16 years. He left a son named EDWARD whom he had by his first wife the daughter of Earl Ordmer; and another, named ETHELRED, by Elfrida, whose mental qualifications were by no means answerable to the beauty of her person. She was ambitious, haughty, treacherous, and cruel. The principal nobility, therefore, were greatly averse from the succession of her son Ethelred, which would unavoidably throw too much power into the hands of his mother, as he was only 7 years of age. Edward was therefore pitched upon; and was certainly the most proper person, as he was 15 years of age, and might soon be able to take the government into his own hands. Elfrida opposed his advancement with all her might; but Dunstan overcame every obstacle, by anointing and crowning the young prince at Kingston; upon which the whole kingdom submitted without farther opposition. The only remarkable occurrence in this reign was the complete victory gained by the monks over the secular clergy, who were now totally expelled from the convents. Though this had been pretty nearly accomplished by Edgar, the secular clergy still had partisans in England who made considerable opposition; but these were all silenced by the following pretended miracles. In one synod, Dunstan, finding the majority of votes against him, rose up, and declared that he had that instant received from heaven a revelation in favour of the monks. The whole assembly was so much overawed by this intelligence, that they proceeded no farther in their deliberations. In another synod, a voice issued from the crucifix, acquainting the members, that the establishment of the monks was founded on the will of heaven, and could not be opposed without impiety. But the third miracle was still more alarming. In another synod the floor of the hall sunk, and great numbers of the members were killed or bruised by their fall. It was remarked that Dunstan had that day prevented the king from attending the synod, and that the beam on which his own chair

stood was the only one which did not sink. These circumstances, instead of making him suspected as the author of the trick, were regarded as proofs of the interposition of Providence in his favour. Edward lived 4 years after he was raised to the throne, in perfect innocence and simplicity. Being incapable of any treacherous intention himself, he suspected none in others. Though his stepmother had opposed his succession, he had always behaved towards her with the greatest respect; and expressed on all occasions the most tender affection for his brother Ethelred. Being one day hunting in the neighbourhood of the castle where Elfrida resided, he paid her a visit unattended by any of his retinue. After mounting his horse with a design to return, he desired some liquor to be brought him. But while he was holding the cup to his head, a servant of Elfrida snatched him behind. The king, finding himself wounded, clapped spurs to his horse; but soon becoming faint by the loss of blood, he fell from the saddle, and his foot being entangled in the stirrup, he was dragged along till he expired. His body was found and privately interred at Wexham by his servants. The English had such a passion for this amiable prince, that they bestowed upon him the appellation of *Martyr*, and even fancied that miracles were wrought at his tomb. Elfrida built monasteries, and submitted to many penances, to atone for her guilt; but, even in this barbarous age, she could never regain the good opinion of the public. After the murder of Edward, his brother Ethelred II. succeeded to the throne without opposition. As he was a minor, the Danes began to renew their incursions. Before they durst attempt any thing of importance, however, they first made a small incursion by way of trial. In 981, they landed in Southampton from 7 vessels; and having ravaged the country, they retired with impunity, carrying a great booty along with them. In 987, they made a similar attempt on the west coast, and were attended with the like success. Finding that matters were not in a favourable situation for their enterprises, they landed in Essex, and, having defeated and killed Brithnot duke of that county, laid waste all the neighbouring provinces. In this extremity, Ethelred, furnished on account of his preposterous conduct, the *Unready*, bribed the enemy with £10,000 to depart the kingdom. This advice was given by Siricius archbishop of Canterbury, and was one of the degenerate nobility; and was attended with the success that might have been expected. The Danes appeared next year off the eastern coast. But in the mean time, the English had determined to assemble at London a fleet capable of repulsing the enemy. This failed of success through the treachery of Alfric Duke of Mercia. Having been formerly banished the kingdom, and having found great difficulty in getting himself restored to his former dignity, he trusted themselves, not to his services or the affections of his countrymen, but to the influence he had over his vassals, and to the public calamities. These last he determined always to promote as far as he could; because in every revolution his assistance would be necessary, and consequently he must receive a continual accession of power. The Eng-

ish had formed a plan for surrounding and destroying the Danish fleet in the harbour; but Alric not only gave the enemy notice of this design, but also deserted with his Squadron the night before the engagement. The plan thus proved unsuccessful, and Ethelred, in revenge, took Algar, Alric's son, and ordered his eyes to be put out. This piece of cruelty could be productive of no good effect. Alric had become so powerful, that, notwithstanding his treachery, it was found impossible to deprive him of the government of Mercia. In 993, the Danes under the command of Sueno, & Sweyn, their king, and the Norwegians concluded by Olaus, or Olave, king of Norway, sailed up the Humber, and destroyed all around them. A powerful army was assembled to oppose these invaders; but through the treachery of the three leaders, all men of Danish extraction, the English were totally defeated.

(17.) ENGLAND, HISTORY OF, FROM THE INVASION BY SUENO AND OLAUS, TO THE DANISH MASSACRE. The Danes, encouraged by their success, entered the Thames in 94 vessels, and laid siege to London. The inhabitants, however, made such a brave defence, that the besiegers were obliged to give over the attempt. Out of revenge, they laid waste Essex, Suffolk, and Hampshire. In these counties they procured horses; by which means they were enabled to penetrate into the more inland parts, and threatened the kingdom with total subjection. Ethelred and his nobles had now recourse to their former expedient. They sent ambassadors to the two northern kings, to whom they promised subsistence and tribute, provided they would, for the present, put an end to their ravages, and soon after depart the kingdom. They agreed to the terms, and peaceably took up their quarters at Southampton. Sueno even paid a visit to Ethelred, and received a certificate of confirmation from the English bishops. The king also made him many presents; and Sueno promised never more to infect the English territories; which promise he afterwards religiously observed. After the departure of Olaus with the Norwegians, Sueno, though less scrupulous, was obliged to leave the kingdom also. But this successful composition procured only a short relief to the nation. The Danes soon after appeared in the Severn; and having ravaged Wales, as well as Cornwall and Devonshire, they sailed round, and entering the mouth of the Tamar, completed the ruin of these two counties. Then, returning to the Bristol channel, and penetrating into the country by the Avon, they over-ran all that country, and carried fire and sword even into Dorsetshire. In 998, they changed the seat of the war, and, after ravaging the isle of Wight, entered the Thames and Medway, where they laid siege to Rochester, and defeated the Kentish men in a great battle. After this victory, the whole province of Kent was made a scene of slaughter and devastation. These miseries forced the English to resort for common defence both by sea and land; and the weakness of the king, the divisions among the nobility, the treachery of some, the cowardice of others, and the want of concert in all, frustrated every endeavour; and their fleets and armies either came too late to attack the enemy,

or were repulsed with disgrace. The English, therefore, devoid both of prudence and unanimity, had recourse to their old expedient which they had so often found to be ineffectual. They offered the Danes a large sum, if they would conclude a peace and depart the kingdom. These ravagers continually rose in their demands; and now required the payment of L. 24,000, which the English submitted to give. The departure of the Danes procured them a temporary relief; which they enjoyed as if it had been to be perpetual, without making any effectual preparations for giving them a more vigorous reception upon their next return. Besides this sum, the Danes were engaged by another motive to depart from England at this time. They were invited over by their countrymen in Normandy, who were hard pressed by Robert king of France, and who found it difficult to defend their settlements against him. It is probable also, that Ethelred, observing the close connection of all the Danes with one another, however they might be divided in government or situation, was desirous of procuring an alliance with that formidable people. For this purpose, being a widower, he made his addresses to Emma, sister to Richard II. Duke of Normandy. They were accepted; the princess came over to England, and was married to the king, A. D. 1001. Though the Danes had been long established in England, and though the similarity of their language with the Saxon had invited them to an early coalition with the natives; they had as yet found so little example of civilized manners among the English, that they retained all their ancient ferocity, and valued themselves only on their national character of military bravery. The English princes had been so well acquainted with their superiority in this respect, that Athelstan and Edgar had been accustomed to keep in pay large bodies of Danish troops, who were quartered about the country, and committed many violences upon the inhabitants. These mercenaries had attained to such an height in luxury, according to the old English writers, that they combed their hair once a-day, bathed themselves once a-week, changed their clothes frequently; and by all these arts of effeminacy, as well as by their military character, had rendered themselves so agreeable to the fair sex, that they debauched the wives and daughters of the English, and had dishonoured many families. But what most provoked the inhabitants was, that, instead of defending them against invaders, they were always ready to betray them to the foreign Danes, and to associate themselves with every straggling party which came from that nation. The animosities between the native English and the Danes who inhabited among them, had from these causes risen to a great height; when Ethelred, from that barbarous policy commonly adopted by weak princes, resolved upon a general massacre of all the Danes throughout the kingdom. On the 13th Nov. 1002, secret orders were dispatched to commence the bloody business every where on the same day; and the festival of St Brice, which fell on a Sunday, the day on which the Danes usually bathed themselves, was chosen for this purpose. These barbarous orders were executed with the utmost exactness. No

distinction was made betwixt the innocent and the guilty ; neither sex nor age was spared ; nor were the cruel executioners satisfied without the tortures, as well as death, of the unhappy victims. Even GUNILDA, sister to the king of Denmark, who had married Earl Paling, and had embraced Christianity, was, by the advice of Edric Earl of Wilts, seized and condemned to death by Ethelred, after seeing her husband and children butchered before her face. This unhappy princess foretold, in the agonies of despair, that her murder would soon be avenged by the total ruin of the English nation. On the subject of this massacre, Mr Hume has the following observations : " Almost all the ancient historians speak of this massacre of the Danes as if it had been universal, and as if every individual of that nation throughout England had been put to death. But the Danes were almost the sole inhabitants in the kingdoms of Northumberland and East Anglia, and were very numerous in Mercia. This representation of the matter was absolutely impossible. Great resistance must have been made, and violent wars ensued ; which was not the case. This account given by Wallingford, though he stands single, must be admitted as the only true one. We are told that the name of *LORDANE*, *lord Dane*, for an idle lazy fellow, who lives at other peoples expense, came from the conduct of the Danes who were put to death. But the English princes had been entirely masters for several generations ; and only supported a military corps of that nation. It seems probable, therefore, that these Danes only were put to death."

(18.) ENGLAND, HISTORY OF, FROM THE MASSACRE OF THE DANES, TO THE NORMAN CONQUEST. The prophecy of GUNILDA was exactly fulfilled. In 1003, Sueno and his Danes, who wanted only a pretence to renew their invasions, appeared off the western coast, and threatened revenge for the slaughter of their countrymen. The English took measures for repulsing the enemy ; but these were defeated through the treachery first of Alfric, and then of Edric, a still greater traitor, who had married the king's daughter, and succeeded Alfric in the command of the British armies. The Danes therefore ravaged the whole country. Agriculture was neglected, a famine ensued, and the kingdom was reduced to the utmost degree of misery. At last the infamous expedient of buying a peace was resorted to ; and the departure of the Danes was purchased, in 1007, at the expence of L. 30,000. The English endeavoured to employ this interval in making preparations against the return of the Danes, which they had reason soon to expect. A law was made, ordering the proprietors of eight hides of land to provide themselves of a horseman and a complete suit of armour ; and those of 310 hides to equip a ship for the defence of the kingdom. By this means a formidable armament was raised. There were 243,600 hides in England ; consequently the ships equipped must be 785. The cavalry was 30,450 men. All hopes of success from this equipment, however, were disappointed by the factions, animosities, and dissensions of the nobility. Edric had caused his brother Brightic to advance an accusation of treason against Wolf-

noth governor of Suffex, the father of the famous Earl Godwin ; who knowing the power and malice of his enemy, thereupon deserted with 10 ships to the Danes. Brightic pursued him with a fleet of 80 sail ; but his ships being shattered in a tempest, and stranded on the coast, he was suddenly attacked by Wolfnoth, and all his vessels were destroyed. The treachery of Edric frustrated every plan of future defence : and the whole navy was at last scattered into the several harbours. These fatal miscarriages, the enemy had leisure to over run the whole kingdom. They had not got such a footing, indeed, that they could hardly have been expelled, even though the nation had been unanimous. But so far did dissent prevail, that the governors of one province refused to march to the assistance of another ; and were at last terrified from assembling their forces for the defence of their own. At last the expedient was tried. A peace was bought for L. 48,000 ; but this did not procure the usual temporary relief. The Danes, knowing that they were now masters of the kingdom, took the opportunity, and continued their devastations. They levied a new contribution of L. 8,000 on the county of Kent alone ; murdered the Abb. of Canterbury who had refused to countenance this exact, and the English nobility submitted every where to the Danish monarch, giving hostages for good behaviour. At last, Ethelred himself, dread ing equally the violence of the enemy and the treachery of his own subjects, fled into Normandy, whether he had already sent queen Edith and her two sons Alfred and Edward. The king received his unfortunate guests with a generosity which does honour to his memory. The flight of Ethelred happened in the end of 1013. He had not been above six weeks in Normandy, when he heard of the death of Sueno, which happened at Gainborough before he had time to establish himself in his new dominions. At the same time he received an invitation from the prelates and nobility to resume the kingdom ; expressing also the hopes, that being now better taught by experience, he would avoid those errors which had been so fatal to himself and his people. But the conduct of Ethelred was incurable. His son-in-law Edric, notwithstanding his repeated treachery still retained such influence at court, that he filled into the king jealousies of Sigefert and Canute, two of the chief nobles of Mercia. Edric invited them into his house, where he murdered them ; while Ethelred partook of the infamy of this action, by confiscating their estates, and confining the widow of Sigefert in a convent. Sigefert's wife was a woman of singular beauty and merit ; and in a visit which was paid her, during her confinement, by prince Edmund the king's eldest son, she inspired him with so violent an affection, that he released her from the convent, and soon after married her without his father's consent. In the mean time, Canute, the son and successor of Sueno, proved an enemy no less terrible to the English than his father had been. He ravaged the eastern coast with merciless fury ; and put ashore all the English hostages at Sandwich, after having cut off their hands and noses. He was at last obliged to return to Denmark, but in a short time

returned, and continued his depredations along the S. coast. He then broke into the counties of Dorset, Wilts, and Somerset; where an army was assembled against him under the command of prince Edmund and duke Edric. The latter still continued his perfidious machinations; and after endeavouring in vain to get the prince into his power, dissipated the army, and then deserted to Canute with 40 vessels. Edmund was not deterred by this treachery. He again assembled his forces, and was in a condition to give the enemy battle. Ethelred, however, had now such recent experience of the treachery of his subjects, that he had lost all confidence in them. He remained in London, pretended sickness, but in reality from an apprehension that they intended to put their peace by delivering him up to his enemies. The army called aloud for their sovereign's march at their head against the Danes; and on a refusal, they were so discouraged, that all the reparations which had been made became ineffectual for the defence of the kingdom. Edmund, deprived of all regular resources for the maintenance of the soldiers, was obliged to commit simularages to those practised by the Danes; and thereby making so many fruitless expeditions into the north, which had submitted entirely to Canute's power, he returned to London, where he found every thing in confusion by the king's death. Ethelred II, died in 1016, after an unhappy reign of 35 years; and was succeeded by his eldest son EDMUND II, surnamed IRONSIDE. He possessed abilities sufficient to have saved his country from ruin, had he come sooner to the throne; but it was now too late. He bravely opposed the Danes, however, notwithstanding every disadvantage; till at last the nobility of both nations offered their kings to come to a compromise, and divide the kingdom between them by treaty. Canute referred to himself Mercia, East Anglia, and Northumberland. The southern parts were left to Edmund. This prince survived the treaty only a month; being murdered at Oxford by two of his chamberlains, accomplices of Edric. After the death of Edmund, nothing was left for the English but submission to Canute. The least scruples of mankind, however, dare not at all times to commit injustice. Canute, therefore, being seized the dominions of Edwin and Edric, the two sons of Edmund, suborned some of the nobility to depose, that, in the last treaty with Edmund, it had been verbally agreed, that, after Edmund's death, Canute should either succeed to his dominions, or tutor to his children; for historians differ with regard to this particular. This evidence, supported by the great power of Canute, was sufficient to get him elected king of England. Immediately after his accession to the throne, he sent the two sons of Edmund to the court of Sweden, on pretence of being there educated; but charged the king to put them to death as soon as they arrived. The Swedish monarch did not comply with this request; he sent them to Solomon king of Hungary, to be educated in his court. The elder, Edwin, was afterwards married to Solomon's sister: but he died without issue, that prince gave his sister-in-law, Judith, daughter of the emperor Henry II, in

marriage to Edward, the younger brother; and she bore him Edgar Atheling; Margaret, afterwards queen of Scotland; and Christina, who retired into a convent. Canute was obliged at first to make great concessions to the nobility: but he afterwards put to death many of those in whom he could not put confidence; and, among the rest, the traitor Edric himself, who was publicly executed, and his body thrown into the Thames. In order to prevent any danger from the Normans, who had threatened him with an invasion, he married Emma the widow of Ethelred II, and who now came over from Normandy; promising that he would leave the children he should have by that marriage heirs to the crown after his decease. The English were at first displeased with Emma for marrying the mortal enemy of her former husband; but at the same time were glad to find at court a sovereign to whom they were accustomed, and who had already formed connections with them: and thus Canute, besides securing by his marriage the alliance with Normandy, gradually acquired by the same means the confidence of his own people. The most remarkable transaction in this prince's reign, besides those mentioned under the article CANUTE, is his expedition to Scotland against Malcolm II, whom he forced to do homage for the county of Cumberland, which the Scots at that time possessed. After this enterprise, Canute passed four years in peace, and died at Shaftsbury; leaving three sons, Sweno, Harold, and Canute. Sweno, whom he had by his first marriage with Alfwena, daughter of the earl of Hampshire, was crowned in Norway; Canute, whom Emma had born, was in possession of Denmark; and Harold, who was of the same marriage with Sweno, was at that time in England. Harold succeeded to the crown of England; though it had been stipulated that Emma's son, Canute, should be heir to that kingdom. This advantage Harold obtained by being on the spot, and getting possession of his father's treasures, while Canute was at a distance. As Canute, however, was supported by earl Godwin, a civil war was likely to ensue, when a compromise was made; by which it was agreed, that Harold should enjoy London, and all the provinces north of the Thames, while the possession of the south should remain to Canute: and till that prince should appear and take possession of his dominions, Emma fixed her residence at Winchester, and ruled her son's part. Harold reigned 4 years; during which time, the only memorable action he performed was a most infamous piece of treachery.—Alfred and Edward, the two sons of Emma by Ethelred, paid a visit to their mother in England. But, in the mean time, earl Godwin being gained over by Harold, a plan was laid for the destruction of the two princes. Alfred was accordingly invited to London by Harold, with many professions of friendship; but when he had reached Guildford, he was set upon by Godwin's vassals: about 600 of his train were murdered in the most cruel manner; he himself was taken prisoner, his eyes were put out, and he was conducted to the monastery of Ely, where he died soon after. Edward and Emma, apprised of the fate which awaited them, fled beyond sea, the former into Normandy, the latter

into Flanders; while Harold took possession of all his brother's dominions without opposition.—He died in April 1039. Canute II, surnamed the *Hardy*, and hence commonly called *HARDICANUTE*, succeeded his brother Harold without opposition. His government was extremely violent and tyrannical. However, it was but of short duration. He died, in 1041, of a debauch at the marriage of a Danish lord. After his death, a favourable opportunity was offered to the English, for shaking off the Danish yoke. Sueno, king of Norway, the eldest son of Canute, was absent; and as the two last kings had died without issue, there appeared none of that race whom the Danes could support as successor to the throne. For this reason, the eyes of the nation were naturally drawn towards prince Edward, who happened to be at court when the king died. But it was feared, that Edward's succession would be opposed by earl Godwin, who was by far the most powerful nobleman in the kingdom. A declared animosity subsisted between Edward and Godwin, on account of the hand which the latter had in the murder of his brother Alfred; and this, it was thought, Edward could never forgive. But here their common friends interposed; and representing the necessity of their good correspondence, obliged them to lay aside their animosities, and to concur in restoring liberty to their native country. Godwin only stipulated that Edward, as a pledge of his sincere reconciliation, should promise to marry his daughter Editha. This proposal was agreed to; Edward was crowned king of England, and married Editha, but the marriage proved rather a source of discord than otherwise. Editha, though a very amiable woman, could never obtain the confidence and affection of her husband. It is even said, that, during the whole course of her life, he abstained from all matrimonial converse with her; and this ridiculous behaviour was highly celebrated by the monkish writers of the age, and contributed to the king's acquiring the titles of *Saint* and *Confessor*. Though the neglect of his daughter could not fail to awaken Godwin's former enmity, it was necessary to choose a more popular ground before he could vent his complaints against the king in a public manner. He therefore chose for his theme the influence which the Normans had on the affairs of government; and a declared opposition took place between him and these favourites. In a short time, this animosity openly broke out with great violence. Eustace count of Bologne having paid a visit to the king, passed by Dover on his return. One of his train, being refused access to a lodging which had been appointed for him, attempted to make his way by force, and wounded the master of the house in the contest. The townsmen revenged this insult by the death of the stranger; the count and his train took arms, and murdered the townsman in his own house. A tumult ensued; near 20 persons were killed on each side; and Eustace being overpowered with numbers, was at last obliged to fly. He complained to the king; who gave orders to earl Godwin, in whose government Dover lay, to punish the inhabitants. But this nobleman refused to obey the command, and endeavoured to throw the whole blame on

count Eustace and his followers. The king was displeased; and threatened to make him feel the utmost effects of his resentment, in case he finally refused to comply. Upon this, Godwin assembled a powerful army, on pretence of repressing some disorders on the frontiers of Wales; but instead of this, marched directly to Gloucester, where the king was at that time without any military force. Edward perceiving his danger, applied Siward duke of Northumberland, and Leofwin duke of Mercia, who hastened to him with their followers, and ordered all the forces under their respective governments to march without delay to the defence of the king. Godwin, in the meantime, suffered himself to be deceived by negotiations, till the king's army became so powerful that he was not able to cope with it. He was therefore obliged to fly with his family to Flanders, where he was protected by earl Baldwin together with his three sons, Gurth, Sueno, and Tofti; the last of whom had married Baldwin's daughter. Harold and Leofwin, two others of Godwin, took shelter in Ireland. After the flight of earl Godwin, he was proceeded against as a traitor by king Edward. His estates, those of his sons, were confiscated; his goods were given to others; queen Editha was confined in a monastery; and the great power of his family, which had become formidable to the crown itself, seemed to be totally overthrown. Godwin, however, soon found means to retrieve his fortunes. Having hired some ships, and manned them with his followers, he attempted to make a descent on Sandwich. The king, informed of his preparations, equipped a fleet which Godwin could resist, and he therefore retreated into the Fleet harbours. On his departure, the English completed their armament. This Godwin had expected, and therefore kept himself in readiness for a favourable opportunity. He immediately passed the sea, and sailed to the Isle of Wight, where he was joined by Harold with a squadron which he had collected in Ireland. Being thus masters of the sea, Godwin entered the harbours on the southern coast; seized all the ships; and was joined by great numbers of his former vassals. He failed up the Thames, and appeared before London. The approach of such a formidable enemy threw every thing into confusion. The king alone seemed resolved to defend himself to the extremity; but the interposition of many of his nobility, together with the submission of Godwin himself, at last produced an accommodation. It was stipulated, that Godwin should give hostages for his good behaviour, and that all the foreigners should be banished the kingdom; after which Edward, sensible that he had not power to detain the earl's hostages in England, sent them over to his kinsman the young duke of Normandy. Soon after this reconciliation, Godwin died as he was sitting at table with the king. He was succeeded in the government of Wessex, Sussex, Kent, and Essex, and in the office of steward of the household, a place of great power, by his son Harold, who was no less ambitious than his father; and as he was a man of much greater abilities, he became a more dangerous enemy to Edward than earl Godwin himself. Edward knew no better way

ot to prevent the increase of Harold's power, by giving him a rival. This was Algar son Leofric duke of Mercia, whom he invested with the government of East Anglia, which had formerly belonged to Harold. The latter, however, after some broils, finally got the better of rival, and banished him the kingdom. Algar died soon after with an army of Norwegians, whom he invaded East Anglia; but his death short time freed Harold from all further apprehensions from that quarter. His power was further increased soon after, by the accession of his brother Tosti to the government of Northumberland; and Edward, apprehensive that Harold would attempt to usurp the crown after his death, resolved to appoint a successor. He therefore sent a deputation into Hungary, to invite his nephew, Edward, son to his elder brother, who was the only remaining heir of the Saxon

That prince accordingly came over with his son, Edgar Atheling, Margaret, and Christobur, and died a few days after his arrival. His death threw the king into greater perplexity than

Being resolved to exclude Harold if possible, he secretly cast his eye on his kinsman William, duke of Normandy; a person of whose power, character, and capacity, he had a very high opinion.

The advice had formerly been given him by the abbot of Canterbury, who was himself banished, and had been banished along with the earl Godwin. But Edward, finding that the English would more easily submit to a sovereign of the Saxon line, had invited his brother's descendants from Hungary. The death of his nephew, and the inexperience of Edgar, made him resume his former inclination in favour of the duke of Normandy, and his aversion to hazardous enterprises enabled him to postpone the execution, and even to conceal his purpose from all his ministers.

Harold in the mean time increased his popularity by all possible means, to prepare his way to the throne after the death of Edward. He had conceived the duke of Normandy as a rival; he knew that a son and grandson of the earl Godwin were in the hands of that prince as hostages; he feared that they might be made use of to support his ambition, in case he attempted to ascend the throne. He therefore wrote to Edward to release these hostages conditionally; and having obtained his consent, he wrote for Normandy, attended by a numerous army. He was driven by a tempest on the coast of Guy count of Ponthieu, who detained him as a prisoner, and demanded an exorbitant ransom. Harold found means to acquaint himself with his situation. The duke of Normandy, desirous of gaining Harold over to his side, commanded Guy to restore his prisoner to liberty. Upon this Harold was immediately conducted to the hands of the Norman ambassador, who conducted him to Rouen. William received with great demonstrations of friendship; but acquainted him with his pretensions to the crown of England, and asked his assistance in the execution of his scheme. Harold was surprised, finding entirely in the duke's power, he feigned compliance with his desires, and promised

to second to the utmost of his ability the will of king Edward. William, to secure him to his interest, promised him his daughter in marriage, and required him to take an oath that he would fulfil his promises. Harold readily complied; but to make the oath more binding, William privately conveyed under the altar where the oath was taken, reliques of some of the most revered martyrs; and when Harold had taken the oath, he showed him the reliques, and admonished him to observe religiously such a solemn engagement. Harold was no sooner at liberty, than he found himself master of casuistry sufficient to excuse the breaking of his oath, which had been extorted from him, and which, if kept, might be attended with the subjection of his country to a foreign power. He continued to practise every art to increase his popularity; and about this time, two accidents enabled him to add much to that character which he had already so well established. The Welsh had for some time made incursions into the English territories, and had lately become so troublesome, that Harold thought he could not do a more acceptable piece of service, than to undertake an expedition against these invaders. Having prepared some light armed foot to pursue the natives into their fortresses, some cavalry to secure the open country, and a squadron of ships to attack the sea coasts, he employed all these forces against the enemy at once; and thus reduced them to such distress, that they were obliged to purchase peace by sending the head of Grifin, their prince, to Harold, and submitting to the government of two Welsh noblemen appointed by Edward. The other incident was no less honourable to Harold. Tosti his brother had been created duke of Northumberland; but being of a violent tyrannical temper, had treated the inhabitants with such cruelty, that they rose in rebellion against him, and drove him from the government. Morcar and Edwin, two brothers, grandsons of the great duke Leofric, joined in the insurrection; and the former being elected duke, advanced with an army to oppose Harold, who had been commissioned by the king to reduce and punish the Northumbrians. Before the armies engaged, Morcar endeavoured to justify his conduct, and represented to Harold, that Tosti had behaved in such a manner, that no one, not even a brother, could defend him without participating of the infamy of his conduct: that the Northumbrians were willing to submit to the king, but required a governor that would pay some attention to their privileges; and they trusted that Harold would not defend in another that violent conduct, from which his own government had always kept at so great a distance. This speech was accompanied with such a detail of well supported facts, that Harold abandoned his brother's cause; and returning to Edward, persuaded him to pardon the Northumbrians, and confirm Morcar in his government. He even married the sister of that nobleman; and by his interest procured Edwin the younger brother to be made governor of Mercia. Tosti, in a rage, departed the kingdom, and took shelter in Flanders with Baldwin his father-in-law; while William of Normandy saw that now he had nothing to expect from Harold, who plainly intended to secure the

crown for himself. Edward died in 1066, aged 65, and was succeeded by Harold II, with as little opposition as if he had been the lawful heir. The very day after Edward's death, he was anointed and crowned by the Archbishop of York. The whole nation seemed joyfully to swear allegiance to him. But he did not long enjoy the crown, to obtain which he had taken so much pains, and which he seemed to have such capacity for wearing. His brother Tostig, provoked at his success, stirred up against him every enemy he could have any influence with. The duke of Normandy also was enraged to the last degree at his perfidy; but before he commenced hostilities, he sent an embassy to England, upbraiding the king with his breach of faith, and summoning him to resign the kingdom immediately. Harold replied, that the oath, with which he was reproached, had been extorted by the well grounded fear of violence, and for that reason could never be regarded as obligatory: that he never had any commission either from the late king or the states of England, who alone could dispose of the crown, to make any tender of the succession to the duke of Normandy; and if he, a private person, had assumed so much authority, and had even voluntarily sworn to support the duke's pretensions, the oath was unlawful, and it was his duty to take the first opportunity of breaking it: that he had obtained the crown by the unanimous suffrages of the people; and should show himself totally unworthy of their favour, did he not strenuously maintain those liberties with which they had entrusted him; and that the duke, if he made any attempt by force of arms, should experience the power of an united nation, conducted by a prince, who, sensible of the obligations imposed on him by his royal dignity, was determined, that the same moment should put a period to his life and to his government. This answer was according to William's expectations; and therefore he had already made preparations for invading England. He was encouraged and assisted in this enterprise by Howel count of Brittany, Baldwin earl of Flanders, the emperor Henry IV. and pope Alexander II. The latter declared Harold a perjured usurper; denounced excommunication against him and his adherents; and the more to encourage William in his enterprises, sent him a consecrated banner, and a ring with one of St Peter's hairs in it. Thus he was enabled to assemble a fleet of 300 vessels, on board of which were embarked 60,000 men, chosen from among those numerous supplies which were sent him from all quarters. Many eminent personages were enlisted under his banners. To embarrass the affairs of Harold the more effectually, William also excited Tostig, in concert with Harfager king of Norway, to infect the English coasts. These two having collected a fleet of 350 ships, sailed up the Humber, and disembarked their troops, who began to commit great depredations. They were opposed by Morcar earl of Northumberland, and Edwin earl of Mercia, who were defeated. Harold, on the news of this invasion, assembled a considerable army, engaged the enemy at Stamford, and after a bloody battle entirely defeated them. Tostig and Harfager were killed in the ac-

tion, and all the fleet fell into the hands of the victors; but Harold generously allowed Olaf, the son of Harfager, to depart with 10 vessels. He had scarce time to rejoice on account of his victory, when news were brought that the Normans were landed in Suffex. Harold's victory had considerably weakened his army. He lost many of his bravest men in the action; and he disgusted the rest, by refusing to distribute the spoils among them. He hastened, however, by quick marches to repel this new invader; but though he was reinforced at London and other places with his troops, he found himself weakened by the desertion of his old soldiers, who, from fatigue and discontent, secretly withdrew. Gurth, the brother of Harold, a man of great conduct as well as bravery, became apprehensive of the event; and treated the king to avoid a general engagement for some time, or at least not to hazard his person. But though this advice was evidently proper, Harold continued deaf to every thing that could be said. Accordingly, on the 14th Oct. 1066, the two armies engaged near Hastings, in Suffex. After a most obstinate and bloody battle, (See HISTORIES,) the English were entirely defeated. Harold and his two brothers killed, and William left master of the kingdom of England.

(19.) ENGLAND, HISTORY OF, FROM THE NORMAN CONQUEST TO THE DEATH OF WILLIAM. Nothing could exceed the terror of the English upon the news of the defeat and death of Harold. As soon as William passed the Thames at Wokingford, Stigand, the primate, made submission to him in the name of the clergy; and before he came within sight of London, all the chief nobility, and even Edgar Atheling himself, who, by the rightful heir to the throne, had just been declared king, came and submitted to the conqueror. William very readily accepted of the crown upon the terms offered him; viz. that he should govern according to the established customs of the country. He could indeed have made terms he pleased; but, though really a conqueror, he chose rather to be thought an elected king. For this reason he was crowned at Westminster by the Abp. of York, and took the usual oath that he would protect and defend the church, serve the laws of the realm, and govern the kingdom with impartiality. The English began to complain of the most grievous oppression by William and his Normans. Whether the conquest willingly gave the English opportunities of complaining against him, in order to have a pretext for oppressing them afterwards, is uncertain; but the beginning of his reign cannot justly be blamed. The first disgust against his government was excited among the clergy. William could not reward those numerous adventurers who accompanied him in his expedition. He had divided the lands of the English barons, who had opposed him, among his Norman barons; but as these were insufficient, he quartered the rest on the abbey, until some other opportunity of providing for them should offer. This last step was resented by the clergy, but gave little offence to the laity. The whole nation, however, was after disgusted, by seeing all the real power of the kingdom placed in the hands of the Normans.

disarmed the city of London, and other places which appeared most warlike and populous, and quartered Norman soldiers wherever he dreaded an insurrection. Having thus secured England, as he imagined, from any danger of a revolt, he determined to pay a visit to his Norman dominions. He appointed his brother Odo, bishop of Bayeux, and William Fitz-Osborne, regents in his absence; and to secure himself yet farther, he resolved to carry along with him such of the English nobility as he had the least confidence in. Having taken these methods to ensure tranquillity, William set sail for Normandy in March, 1067; but his absence produced the most fatal consequences. Discontents and murmurings were multiplied everywhere; secret conspiracies were entered into; hostilities were commenced in many places; and every thing seemed to threaten a speedy revolution. William of Poitiers, a Norman historian, throws the blame entirely on the English. He calls them a fickle and mutinous race, while he celebrates with the highest encomiums the justice and lenity of Odo's and Fitz-Osborne's administration. On the other hand, the English historians tell us, that these governors took all opportunities of oppressing the people, either with a view to provoke them to rebellion, or to enrich themselves in case they tamely submitted. Be this as it may, a secret conspiracy was formed among the English for a general massacre of the Normans, the what had formerly been made of the Danes. This was prosecuted with so much animosity, that the vassals of the earl of Coxo put him to death because he refused to head them in the enterprise. The conspirators had already taken their resolution, and fixed the day for the intended massacre, to be on Ash Wednesday, during the time of divine service, when all the Normans would be united as penitents. But the presence of William concerted all their schemes. Having got intelligence of their bloody purpose, he hastened over to England. Such of the conspirators, as had not more open in their rebellion, fled, and this confirmed the accusation against those who remained. From this time the king not only lost all confidence in his English subjects, but regarded them as irreconcilable enemies. He had already fixed such a number of fortresses in the country, that he no longer dreaded the tumultuous efforts of a discontented multitude. He determined therefore to treat them as a conquered nation. The first instance of this treatment was his revival the tax of *DANE GELT*, which was very odious to the people, and produced great discontents. The inhabitants of Exeter and Cornwall revolted; but were soon reduced. A more dangerous rebellion happened in the north; but this was also quashed, and the English became sensible that further resistance was vain. Their easy submission after the battle of Hastings had inspired the Normans with contempt; their commotions had rendered them objects of hatred; and they were now deprived of every means which could make them either feared or beloved by their sovereign. Many fled into foreign countries; and among the rest Edgar Atheling, who made his way to Scotland, with his two sisters, Margaret and Christina. They were well received by Mal-

colm III, who soon after married Margaret, and received great numbers of other exiles with the utmost kindness. The English, though unable to make any resistance openly, did not fail to gratify their resentment against the Normans privately. Seldom a day passed, but the bodies of assassinated Normans were found in the woods and high-ways, without any possibility of bringing the perpetrators to justice. This made the conquerors themselves begin to wish for tranquillity and security; and several of those entrusted with great commands, desired to be dismissed the service. To prevent these desertions, William was obliged to allure others to stay by the largeness of his bounties. The consequences were, fresh exactions from the English, and new insurrections on their part against their cruel masters. The Norman power, however, was too well founded to be now removed, and every attempt of the English to regain their liberty served only to rivet their chains. The county of Northumberland, which had been most active in these insurrections, now suffered most severely. The whole of it was laid waste, the houses were burned, the instruments of agriculture destroyed, and the inhabitants dispersed. On this occasion it is said that above 100,000 persons perished either by the sword or famine. The estates of the English gentry were next confiscated, and bestowed on the Normans. Thus all the ancient and honourable families were reduced to beggary; and the English found themselves totally excluded from all honours and preferments. By these proceedings William at last broke the spirit of the English, and received no farther trouble from them. In 1076, however, he found that the latter part of his life was likely to be unhappy through dissensions in his own family. He had four sons, Robert, Richard, William, and Henry, besides several daughters. Robert, his eldest son, surnamed *Curt-bowe*, from the shortness of his legs, was a prince who inherited all the bravery and ambition of his family. He had formerly been promised by his father the government of the province of Maine in France, and was also declared successor to the dukedom of Normandy. He demanded the fulfilment of these promises; but William gave him a flat denial, observing, that "it was not his custom to throw off his clothes till he went to bed." Robert declared his resentment; and openly expressed his jealousy of his brothers William and Henry, for Richard had been killed, in hunting, by a stag. An open rupture was soon commenced. The two young princes one day threw water on their elder brother as he passed through the court after leaving their apartment. Robert construed this frolic into a studied indignity; and having these jealousies still farther inflamed by one of his favourites, he drew his sword, and ran up stairs with an intent to take revenge. The whole castle was quickly filled with tumult, and it was not without difficulty that the king himself was able to appease it. But he could not allay the animosity which from that moment prevailed in his family. Robert, attended by several of his confederates, withdrew to Rouen that very night, hoping to surprise the castle; but his design was defeated by the governor. The popularity of the prince, however, engaged all the

young nobility of Normandy, as well as of Anjou and Brittany, to espouse his quarrel; even his mother is supposed to have supported him in his rebellion by secret remittances. The unnatural contest continued for several years; and William was at last obliged to have recourse to England for support against his own son. Accordingly he led an army of Englishmen over to Normandy, where he soon compelled Robert and his adherents to quit the field, and was quickly reinstated in his dominions. Robert then took shelter in the castle of Gerberoy, which the king of France had provided for him, where he was shortly after besieged by his father. As the garrison was strong, they made a gallant defence, and many skirmishes and duels were fought under its walls. In one of these the king and his son happened to meet; but being both concealed by their helmets, they attacked each other with mutual fury. The young prince wounded his father in the arm, and threw him from his horse. The next blow would probably have put an end to his life, had he not called for assistance. Robert instantly recollected his father's voice, leaped from his horse, and raised him from the ground. He prostrated himself in his presence, asked pardon for his offences, and promised for the future a strict adherence to his duty. The king was not so easily appeased; and no doubt his resentment was heightened by the disgrace of being overcome. He therefore gave his malediction to his son; and returned to his own camp on Robert's horse, which he had assisted him to mount. After some recollection, however, he was reconciled to Robert, and took him with him into England. William returned in 1081; and being now freed from his enemies at home and abroad, began to attend to his domestic affairs. For this purpose the DOOMSDAY BOOK was composed by his order. See DOMESDAY. He reserved a very ample revenue for the crown; and in the general distribution of land among his followers, kept possession of no fewer than 1400 manors in different parts of the country. No king of England was ever so opulent; none was able to support the splendor of a court to such a degree; none had so many places of trust and profit to bestow; and consequently none ever had such implicit obedience paid to his commands. He delighted greatly in hunting; and to indulge himself in this with the greater freedom, he depopulated Hampshire for 30 miles, turning out the inhabitants, destroying all the villages, and making the wretched outcasts no compensation for such an injury. In the time of the Saxon kings, all noblemen had a right to hunt in the royal forests; but William appropriated all these to himself, and published the first severe game laws. The killing of a boar, a deer, or even a hare, was punished with the loss of the delinquent's eyes; while the killing of a man might be atoned for by paying a moderate fine. As the king's wealth and power were so great, the riches of his ministers were in proportion. Odo, bishop of Bayeux, William's brother, was so rich, that he resolved to purchase the papacy. For this purpose, during the king's absence he equipped a vessel in the Isle of Wight, on board of which he sent immense treasures, and prepared for his embarkation. He was detained,

however, by contrary winds, till William, being informed of his designs, resolved to prevent the exportation of so much wealth from his dominions. Returning from Normandy, he came to England the very instant his brother was stepping on board. He immediately ordered him to be made prisoner; but his attendants, respecting the bishop's sacred character, scrupled to execute his commands; so that the king was obliged to seize him with his own hand. Odo appealed to the Pope: but the king replied, that he did not seize him as bishop of Bayeux, but as earl of Kent; and, in that capacity, he demanded an account of his administration. He was therefore sent prisoner to Normandy; and, notwithstanding all the threats of pope Gregory VII, was detained in custody during the remainder of William's reign. Soon after this, William felt a severe blow in the death of Matilda his queen; and, almost at the same time, received information of a general insurrection in Maine, the nobility of which had always been adverse to his government. Upon his arrival on the continent, he found that the insurgents had been secretly excited by the king of France, who took all opportunities of lessening the Norman power, by creating dissensions among the nobles. His displeasure on this account was very much increased, by notice he received of some raileries thrown out against him by the French monarch. William, who was become corpulent, had been detained in bed some time by sickness; and Philip was heard to say, that he only lay in of a big belly. This provoked the English monarch, that he sent him word, he would soon be up, and would at his *churching*, present such a number of tapes as would set the kingdom of France in a flame. He accordingly levied a powerful army; and, entering the Isle of France, destroyed every thing with fire and sword. He took the town of Mantes and reduced it to ashes. But a period was lost, put to the conquests and the life of this great warrior. His horse happening to put his fore feet on some hot ashes, plunged so violently, that the king was thrown forward, and bruised his belly on the pommel of the saddle. Being now in a bad habit of body, as well as advanced in years, he began to be apprehensive of the consequences, and ordered himself to be carried in a litter to the monastery of St Gervaise. Finding his illness increased and being sensible of the approach of death, he discovered at last the vanity of all human grandeur; and was struck with remorse for the many cruelties and violences of which he had been guilty. He endeavoured to make compensation by presents to churches and monasteries, and gave orders for the liberation of several English noblemen. He was even prevailed upon to release his brother Odo, against whom he was very much incensed. He left Normandy and Maine to his eldest son Robert. He wrote to Lanfranc the primate, to crown William king of England. To Henry he bequeathed nothing but the possessions of his mother Matilda; but foretold, that one day he would surpass both his brothers in power and opulence. He expired on the 9th Sept. 1087, in the 63d year of his age, in the 21st of his reign over England and 54th of that over Normandy.

(30.) ENGLAND, HISTORY OF, FROM WILLIAM THE CONQUEROR'S DEATH TO THAT OF WILLIAM II. WILLIAM, surnamed RUFUS, from his red hair, was in Normandy at the time of his father's illness. He no sooner received the letter for Lanfranc, than he set out for England; where he arrived before the news of his father's death had reached that kingdom. Sensible that his brother Robert had a preferable title, he used the utmost dispatch in getting himself established on the throne. The English were so effectually subdued, that they made no opposition; but the Norman barons were attached to Robert, who was brave, open, sincere, and generous. Even his predominant fault of indolence was not disagreeable to those haughty barons, who affected an almost total independence of their sovereign. William, on the other hand, was violent, haughty, and tyrannical. A strong conspiracy was therefore carried on against William; and Odo, bishop of Bayeux, undertook to conduct it. Many of the most powerful nobility were concerned; and as the conspirators expected large succours from Normandy, they retired to their castles, and put themselves in an offensive posture. William, sensible of his danger, engaged the English on his side, by promising some mitigation of their hardships, and liberty to hunt in the royal forests. Robert, in the mean time, through his natural indolence, neglected to give his allies proper assistance. The conspirators were obliged to submit. Some of them were pardoned; but most of them confiscated, and their estates bestowed on the barons who had continued faithful to the king. William, freed from this danger, thought no more of his promises to the English. He proved a greater tyrant than his father; and after the death of Lanfranc, who had been his preceptor, and kept him within some bounds, he gave full scope to his rapacity. Not content with oppressing the laity, he invaded the privileges of the church; which, in those days, were held most sacred. He seized the temporalities of all the vacant bishoprics and abbeys, and openly put many of them to sale. These proceedings occasioned great murmurs, but the terror of William's authority preserved the public tranquillity. In 1090, the king thought himself strong enough to attempt the conquest of Normandy, which at that time was in the greatest confusion through the indolent administration of Robert. Several of the barons had revolted, and were encouraged by the king of France. Robert alone imagined he had reason to fear the intrigues of his other brother Henry, whom for 3000 marks he had put in possession of *Cotentin*, near a third part of the duchy of Normandy. He therefore drew him into prison; but finding himself threatened with an invasion from the king of England, he gave Henry his liberty, and even made use of his assistance in suppressing the insurrections of his rebellious subjects. William, however, was no sooner landed in Normandy, than the nobility on both sides interposed, and a treaty of peace was concluded. In this treaty Henry finding his interests entirely neglected, retired to St Michael's Mount, a strong fortress on the coast of Normandy, and infected the neighbourhood with his insurrections. He was besieged by his two brothers,

and obliged to capitulate; after which, being deprived of all his dominions, he wandered about for some time with very few attendants, and often in great poverty. The peace with Robert was of short duration. In the interval some hostilities with Scotland succeeded, and these terminated in the death of Malcolm III; after which new broils ensued with Normandy. William's rapacity prompted him to encroach upon his brother's territories, as well as to use a very extraordinary expedient to accomplish his designs. Having gone over to Normandy to support his partisans, he ordered an army of 20,000 men to be raised in England, and conducted to the sea-coast as if they were to be immediately embarked; but when they came there, instead of embarking, they were forced to pay the king 20s. a man; after which they were dismissed. With this money William engaged the king of France to depart from the protection of Robert; and also bribed many of the Norman barons to revolt. He was called from Normandy, however, by an irruption of the Welsh; and having repulsed them, he was prevented from attempting other enterprises by a conspiracy of his barons. In 1096, however, the superstition of Robert put the king of England in possession of those dominions which he had not been able to conquer by force of arms. The crusades were now commenced, and Robert was desirous of undertaking an expedition into the Holy Land. As money for this purpose was wanting, he mortgaged his dominions to his brother for 10,000 marks. The king raised the money by violent extortions on his subjects; forcing even the convents to melt their plate, in order to furnish the quota demanded of them. He was then put in possession of Normandy and Maine; and Robert with a magnificent train set out for the Holy Land. After the death of Lanfranc, the king had retained in his own hands the revenues of Canterbury, as he had done those of many other bishoprics; but falling into a dangerous illness, he was seized with remorse; and the clergy represented to him that he was in danger of eternal perdition if he did not make atonement for those impieties and sacrileges of which he had been guilty. He therefore instantly resolved to supply the vacancy of Canterbury; he sent for Anselm abbot of Bec in Normandy, who was much celebrated for his piety. (See ANSELM.) The abbot refused the dignity with great earnestness; fell on his knees, wept, and intreated the king to change his purpose; and when he found him obstinate in forcing the pastoral staff upon him, he kept his fist so hard clenched that it required the utmost violence of the bystanders to open it, and force him to receive that ensign of his spiritual dignity. William soon after recovered his health, and with it his violence and rapacity. As he now spared the church no more than before, a quarrel with Anselm soon ensued; and this was the more dangerous to the king, on account of the great character for piety which the primate had acquired, by his zeal against abuses of all kinds, particularly those of dress and ornament. At that period a mode prevailed not only in England, but throughout Europe, both among men and women, of giving an enormous length to their shoes, drawing the toe to a sharp point, and as-

fixing to it the figure of a bird's bill, or some such ornament, which was turned upwards, and which was often sustained by a gold or silver chain tied to the knee. The ecclesiastics took exception at this ornament, which they said was an attempt to bely the scripture, where it is affirmed, that "no man can add a cubit to his stature;" and they not only declaimed against it with vehemence, but assembled some synods, in which the fashion was absolutely condemned. Such, however, are the contradictions in human nature, that all the influence of the clergy, which at that time was sufficient to send vast multitudes of people into Asia to butcher one another, was not able to prevail against those long-pointed shoes. The fashion, contrary to what hath happened to almost all others, maintained its ground for several centuries; and even Anselm found his endeavours against it ineffectual. He was more successful in decrying the long hair and curled locks then worn by the courtiers. He refused the ashes on Ash-Wednesday to such as were so accoutred; and his authority and eloquence had such influence, that the young men universally abandoned that ornament, and appeared in the cropt hair recommended by the primate. For this reformation Anselm is highly celebrated by his historian Radmer. (See RADMER.) When William's profaneness returned with his health, he was engaged in almost perpetual contests with ANSELM. These were pretty well settled, when the king, who had undertaken an expedition into Wales, required Anselm to furnish him with a certain number of soldiers. The primate regarded this as an invasion of the rights of the church; and therefore, though he durst not refuse compliance, sent the men so miserably accoutred, that the king threatened him with a prosecution. Anselm demanded restitution of all his revenues which the king had seized, and appealed to Pope Urban II. The quarrel, however, ran so high that the primate found it dangerous to remain in England. He desired and obtained the king's permission to retire beyond sea. His temporalities were confiscated immediately on his departure; but Urban received him as a martyr, and even threatened the king with excommunication. William, however, proceeded, without regarding the threats of the Pope; who he knew was at that time too much engaged with the crusades to mind any other business. Though his acquisition of Maine and Normandy had brought him into perpetual contests with the haughty and turbulent barons who inhabited those countries, and raised endless tumults and insurrections; yet William seemed intent on extending his dominions either by purchase or conquest. William Earl of Poitiers and Duke of Guienne had resolved upon an expedition to the Holy Land; and, for this purpose had put himself at the head of a vast multitude, consisting, according to some historians, of 60,000 horse, and a much greater number of foot. Like Robert of Normandy, he offered to mortgage his dominions for money sufficient to conduct this multitude into Asia. The king accepted his offer; and had prepared a fleet and army to take possession of these dominions, when an unfortunate accident put an end to his projects and his life. He was engaged in hunting,

the sole amusement, and the principal occupation of princes in those rude times. Walter Tyrrel, a French gentleman remarkable for his skill in archery, attended him in this recreation, of which the new forest was the scene. William had dismounted after a chase; and Tyrrel, impatient to show his dexterity, let fly an arrow at a stag which had suddenly started. The arrow glanced from a tree, and struck the king to the heart. He instantly fell down dead; and Tyrrel, terrified at the accident, clapt spurs to his horse, hastened to the sea shore, and embarked for France, where he joined the crusade that was setting out from that country. This happened on the 2d Aug. 1100, after he had reigned 13 years, and lived about 40. His body was found in the woods by the country people, and buried without ceremony at Winchester.

(21.) ENGLAND, HISTORY OF, FROM WILLIAM II.'S DEATH TO THAT OF HENRY I. By the death of William, the crown of right devolved to Robert, his eldest brother. But what Robert had formerly lost by indolence, he was now deprived of by superstition, being absent at the holy war. Henry being in the forest with William, when the latter was killed, he immediately hurried to Winchester, and secured the royal treasure. William de Breteuil, keeper of the treasure, arrived almost at the same instant, and opposed his pretensions, telling him that the treasure belonged to his elder brother, who was now his sovereign, and for whom he was determined to keep it. But Henry, drawing his sword, threatened him with instant death if he dared to disobey him: and others of the king's retinue, who came every moment to Winchester, joining the prince's party, he was obliged to desist. Henry lost no time in accomplishing his purpose. In less than three days he got himself crowned king of England by Maurice bishop of London. Present possession supplied every deficiency of title; and no one dared to appear in defence of the absent prince. The beginning of Henry's reign promised to be favourable to English liberty; owing chiefly to the fear of his brother. To conciliate the affections of his subjects, he passed a charter to remove many of the grievous oppressions which had been complained of during the reigns of his father and brother. He promised, that at the death of any abbot or bishop, he never would seize the revenues of the see or abbey during the vacancy, but would leave the whole to be reaped by the successor; and that he would never let to farm any ecclesiastical benefice, or dispose of it for money. To the last he promised, that upon the death of any baron, or military tenant, his heir should be admitted to the possession of his estate, on paying just and lawful relief; without being exposed to those enormous exactions which had been formerly required. He remitted the wardship of minors, and allowed guardians to be appointed, who should be answerable for the trust. He promised not to dispose of any heiress in marriage but by advice of all the barons; and if any baron intended to give his daughter, sister, niece, or kinswoman, in marriage, it should only be necessary for him to consult the king, who promised to take no money for his consent, nor ever to refuse permission, unless the person to whom it was proposed to marry her should

would happen to be his enemy. He granted his barons and military tenants the power of bequeathing by will their money or personal estates; and they neglected to make a will, he promised that their heirs should succeed to them. He renounced the right of imposing moneyage, and levying fines at pleasure, on the farms which the barons held in their own hands. He made some general concessions of moderating fines; he offered a pardon for all offences; and remitted all debts due to the crown. He also required, that the vassals the barons should enjoy the same privileges which he granted to his own barons; and he procured a general confirmation and observance of the laws of king Edward. See FEUDAL SYSTEM. To give greater authenticity to those concessions, a copy of the charter was lodged in some abbey of each county. Henry, farther to increase his popularity, degraded and imprisoned Ralph Flamborough bishop of Durham, who had been the chief instrument of oppression under his brother. He then for Anselm, who was then at Lyons, inviting him to return and take possession of his dignities, Anselm returned; but when Henry proposed to him to do the same homage to him which he had done to his brother, the king met with an absolute refusal. During his exile, Anselm had assisted the council of Bari: where, besides fixing the controversy between the Greek and Latin churches concerning the procession of the Holy Spirit, the right of election to church preferments declared to belong to the clergy alone, and secular censures were denounced against all ecclesiastics who did homage to laymen for their sees, benefices, and on all laymen who exacted it in violation of homage, by the feudal customs was, the vassal should throw himself on his knees, and join hands between those of his superior, should in that posture swear fealty to him. See FEUDAL TENURE. But the council declared it execrable, that pure hands, which could create God, and him up for the salvation of mankind, should be stained by this humiliating manner, between profane persons, which, besides being inured to rapine and bloodshed, were employed day and night in impure purposes and obscene contacts. To this therefore Anselm appealed; and declared, that in doing homage for his spiritual dignity, he would not even communicate with any ecclesiastic who paid that submission, or who accepted of retributions from laymen. Henry durst not insist, and therefore desired that the controversy should be suspended, and that messengers might be sent to Rome to accommodate matters with the pope, and to obtain his confirmation of the laws and customs of England. Henry now took another step, which seemed capable of confirming his authority to the crown without any danger of a rival. The English remembered with regret their former monarchs, when they compared the liberty enjoyed under them with the tyranny of the present reign. Some descendants of that favourite still remained; and among the rest, Matilda, the niece of Edgar Atheling. Upon her the king cast his eyes as a proper consort, by whose means the breach between the Saxons and Normans might be cemented. A difficulty, however, oc-

curred, because she had been educated in a monastery. The affair was examined by Anselm in a council of prelates and nobles summoned at Lambeth. Matilda there proved, that she had put on the veil, not with a design of entering into a religious life, but merely in imitation of a custom familiar to the English ladies, who protected their chastity from the brutal violence of the Normans by taking shelter under that habit, which, amid the horrid licentiousness of the times, was yet generally revered. The council, sensible that even a princess had otherwise no security for her honour, admitted this reason as valid. They pronounced that Matilda was still free to marry; and her nuptials with Henry were celebrated by Anselm with great solemnity and pomp. While Henry was thus rendering himself popular at home, his brother Robert, who had loitered away a twelvemonth in Italy, where he married Sibylla daughter of the count of Conversana, arrived in England, in 1101, to put in his claim to the crown. His fame on account of the exploits he had performed in Palestine, was so great, that even yet he was joined by many noblemen of the first rank, and the whole nation seemed prepossessed in his favour. But Henry having paid his court to Anselm, by his means retained the army in his interests, and marched with them to Portsmouth, where Robert had landed his forces a few days before. The armies lay for some time in sight of each other; when an accommodation was effected through the mediation of Anselm and other great men. By this treaty it was agreed, that Robert should resign his pretensions to England, and receive in lieu of them an annual pension of 3000 marks; that if either of the princes died without issue, the other should succeed to his dominions; that the adherents of each should be pardoned; and restored to all their possessions either in Normandy or England; and that neither Robert nor Henry should henceforth encourage, receive, or protect the enemies of each other. The two princes separated with mutual marks of friendship; but next year, Henry, under various pretences confiscated the estates of almost all the noblemen who had favoured his brother's pretensions. Robert, enraged at the fate of his friends, ventured to come to England to remonstrate with his brother in person. But he met with such a bad reception, that, apprehending his liberty to be in danger, he was glad to make his escape by resigning his pension. This infringement of the treaty was followed the next year by an invasion of Normandy, at the desire of Robert's own subjects, whom he was totally incapable of governing. See NORMANDY. The event of this war was the defeat and captivity of Robert, who was henceforth deprived not only of all his dominions, but of his personal liberty. He lived 28 years a prisoner, and died in the castle of Cardiff, in Glamorganshire. It is even said by some, that he was deprived of his sight by a red-hot copper basin applied to his eyes, and that king Henry appeased his conscience by founding the monastery of Reading. The conquest of Normandy was completed in 1066; and next year the controversy between the king and primate, concerning the investitures

of clergymen and their doing homage to princes, was refused. The king was very sensible that it was not his interest to quarrel with such a powerful body as the clergy were at that time; and on the other hand, he fully understood the necessity of guarding the prerogatives of the crown from their encroachments. While, therefore, he avoided an open rupture with Anselm, he obstinately refused to give up the privileges which had been enjoyed by his predecessors. On the first arrival of Anselm, the king had avoided the dispute in the manner already mentioned. A messenger was dispatched to Rome, to compromise matters with the Pope. The messenger returned with an absolute refusal of the king's demands. One of the reasons given by the Pope on this occasion, was expressed in the following words: "It is monstrous that a son should pretend to beget his father, or a man to create his God: priests are called *gods* in scripture, as being the *vicars of God*: and will you, by your abominable pretensions to grant them their investiture, assume the right of *creating* them?" Henry was not yet convinced; but as he was determined to avoid, or at least to delay, the coming to any dangerous extremity with the church, he persuaded Anselm, that by farther negotiations he should be able to compound matters with the Pope. Messengers were therefore dispatched to Rome a second time from the king; and also from Anselm, who wanted to be fully assured of the Pope's intentions. They returned with letters wrote in the most arrogant and positive manner, both to the king and the primate. The king suppressed the letter sent to himself; and persuaded the three bishops, by whom it was sent, to assert, upon their episcopal faith, that the Pope had assured them of his private good intentions towards king Henry, and of his resolution not to resent any future exertion of his prerogative in granting investitures; though he himself scrupled to give his assurance under his hand, lest other princes should copy the example and assume a like privilege. Anselm's two messengers, who were monks, affirmed that it was impossible this story could have any foundation; but their word was not deemed equivalent to that of three bishops; and the king, as if he had finally gained his cause, proceeded to fill the sees of Hereford and Salisbury, and to invest the new bishops in the usual manner. Anselm, however, gave no credit to the assertions of the king's messengers; and therefore refused not only to consecrate them, but even to communicate with them; and the bishops themselves, finding they were become universally odious, returned the ensigns of their spiritual dignity. The quarrel continued between the king and the primate, till the latter, sensible of his dangerous situation, desired leave to make a journey to Rome, in order to the lay the case before the Pope. This permission was easily obtained; but no sooner was the primate gone, than Henry confiscated all his revenues, and sent another messenger to negotiate with the Pope. The new messenger told his holiness, that his master would sooner part with his crown than the right of granting investitures. "And I (replied the Pope) would rather lose my

head than allow him to retain it." This quarrel now became very dangerous to the king; as he was threatened by the Pope with excommunication, which would have been attended with terrible consequences. At last, however, a compromise was made in the following manner. Before bishops took possession of their dignities, they had formerly been accustomed to pass through two ceremonials: They received, from the hands of the sovereign, a ring and crozier as the symbols of their office, and this was called their *investiture*; they also made those submissions to the prince which were required of the vassals by the rites of the feudal law, and which received the name of *homage*. The Pope, therefore, was for the present contented with Henry's resigning his right of granting investitures, by which the spiritual dignity was supposed to be conferred; and he allowed the bishops to do homage for their temporal properties and privileges. After this, the king allowed Anselm to communicate with the prelates who had already received investitures from the crown; and he only required of them some missions for their past conduct. He also granted to Anselm a plenary power of remedying disorder which he said might arise from the barbarousness of the country. About the same time the marriage of priests was prohibited; and laymen were not allowed to marry within the tenth degree of affinity. By this contrivance the Pope augmented the profits which he received from granting dispensations, and likewise those from divorces. For as the art of writing was then scarce, and parish registers were not regularly kept, it was not easy to ascertain the degrees of affinity among people of rank; and any man who was willing to pay for it, might obtain a divorce on the pretence that his wife was more nearly related to him than was permitted by the canons. A law was also published, prohibiting the clergy to wear long hair; and the king, though he would not sign his prerogatives to the church, very wisely cut his hair in the form which was required of him, obliging all the courtiers at the same time to follow his example. From the time of this promise, in 1107, to the year 1120, nothing remarkable happened, except some slight variations in Normandy: but this year, prince William, the king's only son, was drowned off the coast of Normandy; and Henry was so much affected by the loss, that he was never afterwards to have smiled, or to show the least of his wonted cheerfulness. It is probable, however, that the death of this prince was a great advantage to the British nation, as he had expressed the utmost hatred to the natives, and it was expected, that when he came to the throne, he would make them draw the plough, and would treat them into beasts of burden. These prepossessions he inherited from his father; who, though he pretended, when it might serve his purpose, to value himself on being a native of England, and in the course of his government, an impartial judge against that people. All hopes of a reformation to ecclesiastical as well as civil abuses were denied to the English during his whole reign, and any foreigner, however ignorant or worthless, was sure to have the preference in every

3. The charter, which the king had granted at the beginning of his reign, was no more thought of and fell so much into neglect and oblivion, in the following century, when the barons determined to make it the model of the great charter which they exacted from king John, they could find one copy of it in the whole kingdom; the grievances, proposed to be redressed by continued in their full extent, and were felt everywhere. As Henry had no legitimate child except Matilda, whom in 1120, he had bequeathed, though only 8 years of age, to the emperor of Germany, he was induced to marry a foreigner in hopes of having sons. He accordingly married Adelfa the daughter of Godfrey duke of Flanders, and niece to Pope Calixtus II. a young lady of an amiable person. But she brought no children; and in 1135, the king died in manhood, from eating too plentifully of lambs; having lived 67 years, and reigned 35.

4. ENGLAND, HISTORY OF, TILL THE DEATH OF KING STEPHEN. By the will of king Henry, his daughter Matilda became heiress of all his dominions. She had been married, after her husband's death, to Geoffrey Plantagenet eldest son of the count of Anjou, by whom she had a son named Henry; but as Geoffrey had given fealty to the king of England in several instances, no notice was taken of him in the will. The king had already sworn fealty to her; and she most to show this mark of submission to her husband's will had been Stephen, son of the count (who had married Adela the daughter of the Conqueror). He had been married to Matilda daughter and heiress of Eustace Count of Boulogne; who brought him, besides that feudal sovereignty of France, a vast property in England, which in the distribution of lands had been given by the Conqueror to the family of Boulogne. In his marriage Stephen acquired a new connection with the royal family of England: for Mary, his mother, was sister to David king of Scotland, and Matilda the first wife of Henry and mother of Empress. The king also, imagining that by the grandizement of Stephen he strengthened the power of his own family, had enriched him with many possessions; but instead of this, it appeared by the event that he had only put it in his power to usurp the throne. No soon after Henry's death, than Stephen hastened from Normandy to England. The citizens of Dover and Canterbury shut their gates against him; when he arrived at London, some of the lower people, instigated by his emissaries, immediately proclaimed him king. The archbishop of Canterbury refused to give him the royal uncction; but this difficulty was got over by Stephen's appointing the bishop of Winchester. Hugh Bigod, a favourite of the household, made oath before the king, that the late king, on his death-bed, had expressed a dissatisfaction with his daughter and had expressed his intention of leaving the count of Boulogne heir to all his dominions; the bishop, either believing, or pretending to believe, this testimony, gave Stephen the uncction. Very few of the nobility attended his coronation; but none opposed his usurpation, though flagrantly unjust. Stephen, to

establish himself on the throne as firmly as possible, passed a charter, in which he made liberal promises to all ranks of men. To the clergy he promised, that he would speedily fill all the vacant benefices, and never would levy any of the rents during the vacancy. To the nobility he gave liberty to hunt in their own forests; and to the people he promised to remit the tax of danegelt, and to restore the laws of Edward the Confessor. He seized the king's treasure at Winchester, amounting to 100,000l.; with part of that money he hired mercenary soldiers from the continent; and with another part procured a bull from the Pope, confirming his title to the English throne. Matilda, in the mean time endeavoured to recover her just rights of which Stephen had deprived her; but for some time she met with no success either in England or Normandy. Her husband Geoffrey himself was obliged to conclude a peace with Stephen, on condition of the king's paying him during that time an annual pension of L.5000. Robert Earl of Gloucester was the first who shook the power of Stephen. He was natural son to the late king; a man of great honour and ability, and very much attached to the interests of Matilda. When Stephen usurped the throne, he offered to do him homage, and take the oath of fealty; but with an express condition, that the king should maintain all his stipulations, and never invade any of Robert's rights or dignities. With this condition Stephen was obliged to comply, on account of the great power of that nobleman, though he knew that it was meant only to afford him a favourable opportunity of revolting when occasion served. The clergy imitated Robert's example; and annexed to their oath of allegiance the following condition, namely, that they were only bound as long as the king defended the ecclesiastical liberties, and supported the discipline of the church. The barons, in return for their submission, exacted terms of still more pernicious tendency. Many of them required to have the right of fortifying their castles, and putting themselves in a posture of defence; and with this exorbitant demand the king was forced to comply. All England was immediately filled with fortresses; which the noblemen took care to garrison either with their vassals, or with licentious soldiers, who flocked to them from all quarters. The whole kingdom now became a scene of rapine and devastation. Wars were carried on by the nobles in every quarter; the barons even assumed the right of coining money, and of exercising, without appeal, every act of jurisdiction; and the inferior gentry, as well as the people, finding no defence from the laws, during this total dissolution of sovereign authority, were obliged, for their immediate safety to pay court to some neighbouring chieftain, and to purchase his protection, both by submitting to his exactions, and by assisting him in his rapine upon others. In 1137, the Earl of Gloucester having projected an insurrection, retired beyond sea, sent the king a defiance, and solemnly renounced his allegiance. The next year David king of Scotland appeared with an army in defence of his niece's title; and penetrating into Yorkshire, committed the greatest devastations. He was defeated, however, with great slaughter

at Northallerton, by some of the northern barons, who had raised a powerful army; and this success so much overawed the malecontents in England, that Stephen's power might have received some stability, had he not engaged in a contest with the clergy. He had already seen the mischief arising from the liberty he had granted of fortifying so many castles in different parts of the kingdom. He therefore determined to abridge this liberty as much as possible; and for that purpose he began with the castles erected by the clergy, who seemed to have less right to these military securities than the barons. Taking advantage therefore of a fray, which had arisen at court, between the retinues of the bishop of Salisbury and the Earl of Brittany, he seized the bishops both of Salisbury and Lincoln, threw them into prison, and obliged them to deliver up the castles which they had lately erected. This produced such a violent commotion, that the opportunity seemed favourable to the pretensions of Matilda. On the 22d Sept. 1139, she landed in England with Robert Earl of Gloucester, attended only by 140 knights; but her partisans daily increased, and she was soon in a condition to face Stephen with equal forces in the field. Numberless encounters happened. War was spread through every quarter; and the turbulent barons having in a great measure, shaken off all restraint of government, and now obtained the sanction of fighting in the cause of their country, redoubled their oppressions, tyrannies, and devastations. The castles of the nobility became receptacles of licensed robbers; who, sallying forth day and night, spoiled the open country, plundered the villages, and even cities. They tortured the captives to make them reveal their treasures; sold their persons to slavery; and set fire to the houses, after pillaging them of every thing of value. In consequence of this destruction, the land was left untilled; the instruments of husbandry were abandoned; and a grievous famine reduced the nation to the most deplorable state imaginable. After some indecisive conflicts, a battle ensued which seemed likely to ensure the public peace for some time. Stephen had marched his forces to relieve the city of Lincoln; the Earl of Gloucester led a body of troops to assist those of Matilda's party, who were besieging that place. The two armies engaged on the 2d of February within sight of the city, and a desperate battle ensued. At last Stephen's army was defeated. He himself was for some time left without attendants, and fought on foot in the midst of his enemies, assailed by multitudes, and resisting all their efforts with astonishing intrepidity. Being hemmed in on every side, he forced a way for some time with his battle-ax; but that breaking, he drew his sword, and with it furiously assailed his antagonists, for some time longer. But at length the sword after flying in pieces, he was obliged to surrender himself a prisoner. He was conducted to Gloucester; and though at first treated with respect, he was in a short time, upon some suspicions, thrown into Irons. About a month after, Matilda was crowned at Winchester with great solemnity; but soon showed herself totally incapable of governing such a turbulent nation. She determined to repress the power of the nobles, who had now left only the

shadow of authority to their sovereign. But being destitute of policy or prudence sufficient to accomplish so difficult an undertaking, a conspiracy was soon formed against her, and the bishop of Winchester detached a party of his friends and vassals to block up the city of London where the queen resided. At the same time measures were taken to instigate the Londoners to a revolt, and to seize the queen's person. Matilda, having timely notice of this conspiracy, fled to Winchester. Here she was soon after besieged by the bishop; but the town being distressed by famine she with difficulty made her escape; while the Earl of Gloucester, endeavouring to follow, was taken prisoner, and exchanged for Stephen. Matilda was now obliged to take shelter in Oxford while Stephen reascended the throne. The civil war broke out with redoubled fury. Many battles were fought, and both parties were involved in many distresses. Matilda escaped from Oxford at a time when the fields were covered with ice, by being dressed all in white, with four knights her attendants dressed in the same colour. At another time Stephen was surprised by the earl of Gloucester at Wilton, and made his escape to the utmost difficulty. At last Matilda was obliged to quit the kingdom; and the death of the earl of Gloucester soon after seemed to give a fatal blow to her interests. In 1155, however, prince Henry, Matilda's son by her second husband Geoffrey, came over to England, to dispute once more Stephen's pretensions to the crown. After some success on his first landing, he was opposed by Stephen with a powerful army, and matters seemed likely to come to the decision of a general engagement. But while the two armies continued within a quarter of a mile of each other, a treaty was concluded by the interposition of William earl of Flanders, for terminating the dispute amicably. The death of Eustace, Stephen's son, whom he had designed for the throne, which happened during the course of the treaty, facilitated its conclusion. It was agreed, that Stephen should reign during his life, and that justice should be administered in his name; that Henry, on Stephen's death, should succeed to the kingdom; and that William, Stephen's son, should inherit Boulogne and his personal estate. This treaty filled all England with joy; and after the barons had sworn to it, Henry left England, and Stephen returned to the pleasant enjoyment of his throne. His reign, however, was but short, as he died on the 25th October 1154.

(23.) ENGLAND, HISTORY OF, TO THE DEATH OF HENRY II. Henry was on the continent besieging a castle of one of the mutinous barons, when news was brought him of Stephen's death. But, as he was sensible of the goodness of his cause, he did not abandon his enterprize till the war was reduced. He then set out on his journey, and was received in England with the utmost joy. The first acts of his reign promised a happy and prosperous administration. He instantly dismissed the mercenary soldiers who had committed the greatest disorders. He ordered all the castles which had been erected since Henry I. to be demolished, except a few which he retained in his own hands for the protection of the king-

The adulterated coin which had been struck during the reign of Stephen was cried down, and new money struck of the just value. He resumed many of these benefactions which had been made to churches and monasteries. He gave charters to several towns, granting the citizens their freedom and privileges independent of any superior but himself. These charters were the round-work of the English liberty; for thus a new order, namely, the more opulent of the people, began to claim a share in the administration, as well as the nobility and clergy. Thus the feudal government was at first impaired; and liberty began to be more equally diffused throughout the nation. Henry II. on his accession to the English throne, found himself possessed of very extensive dominions on the continent. In the right of his mother, he possessed Anjou, Touraine, and Maine; that of his mother, Normandy; in that of his father, Guienne, Poitou, Saintonge, Auvergne, Breigord, Angoumois, and Limouzin. Soon after, he annexed Brittany to his other states, by marrying his son, who was yet a child, to the sister of Brittany, who was a child also, and was already in possession of the superiority over that province. These territories composed above a third of the French monarchy, and were by far the most opulent part of it; so that Henry, though distant from the king of France, was greatly his superior in power; and when England was added to these, as Henry VII. had great reason to apprehend some day. The king of England, however, resided too great a distance to be able to employ this mighty power with success against the French monarch. He soon became a kind of stranger in his continental dominions; and his subjects there withdrew their allegiance as more naturally due to their superior lord, who lived in their neighbourhood, and who was acknowledged to be the same head of their nation. Their immediate obedience was often at too great a distance to protect them; and a commotion in any part of Henry's extensive dominions gave great advantages against him. The wise and vigorous administration of Henry, however, counterbalanced in a great measure these disadvantages; and he maintained a surprising tranquillity throughout his extensive dominions during the greatest part of his reign. Henry found no great difficulty in circumscribing the power of the barons; but when he attempted to do the same thing with the clergy, he met with the most violent opposition. That body had carried their independence on the civil power so far, that now they seemed to aim at nothing less than liberty to commit all manner of crimes with impunity. During the reign of Stephen, they had enjoyed an immunity from all but ecclesiastical penalties; (see CLEGGY, § 3, 4.) and that grant they were resolved to maintain for the future. It may easily be supposed, that a law which thus screened their wickedness, contributed to encrease it; and accordingly find upon record, not less than 100 murders committed by men in holy orders, in the short period since the king's accession, not one of which was punished even with degradation; while the bishops themselves seemed to glory in this kind of indulgence. The king did not make any attempts against them during the life of Theobald

Abp. of Canterbury, who was a man of a mild character, and besides had the merit, during the former reign, of having refused to crown Eustace, Stephen's son. He died in 1162; and the king, after his death, advanced to the see of Canterbury Thomas a Becket, his chancellor, on whose compliance he thought he might entirely depend. The new archbishop was the first man of English pedigree, who, since the Norman conquest, had risen to any considerable station. Before his installation in the see of Canterbury, Becket had been exceedingly complaisant, good humoured, and agreeable to his master; and had also been accustomed to live very freely. But no sooner was he invested with this high dignity, than he totally altered his conduct, and put on all those airs of affected and ostentatious humility, which could recommend him to the superstitious and ignorant multitude in that age. The first step taken by this hypocrite after his advancement, was to resign the office of chancellor. This he did without consulting the king: the reason he gave was, that henceforth he must detach himself from secular affairs, and be solely employed in the duties of his sacred function; but in reality, that he might break off all connection with Henry. As he knew that the king intended to abridge the ecclesiastical power, he thought the best method would be to become himself the aggressor. He therefore summoned the earl of Clare to surrender the barony of Tunbridge; which, ever since the conquest, had remained in the family of that nobleman; but which, as it had formerly belonged to the see of Canterbury, the primate pretended that his predecessors were prohibited by the canons from alienating.—William de Eynsford, a military tenant of the crown, was patron of a living which belonged to a manor that held of the Abp. of Canterbury; and Becket, without regard to William's right, presented one Laurence to that living, who was violently expelled by Eynsford. Upon this Eynsford was excommunicated. He complained to the king, that he, who held *in capite* of the crown, should, contrary to the practice established by the Conqueror, and maintained ever since by his successors, be subjected to that terrible sentence, without the previous consent of the sovereign. Henry commanded Becket to absolve Eynsford. The haughty primate answered, that it belonged not to the king to inform him whom he should absolve, and whom excommunicate; but, after all, he was obliged to comply with the king's orders. As Henry perceived that the crown was now in danger, through the superstition of the people, of falling totally under the power of the clergy, he resolved to exert himself to the utmost against their scandalous usurpations. Among their other inventions to obtain money, they had inculcated the necessity of PENANCE as an atonement for sin; and having again introduced the practice of paying them large sums as an equivalent for these penances, the sins of the people had thus become a revenue to the priests; and the king computed, that, by this invention alone, they levied more money from his subjects than what flowed by all the funds and taxes into the royal exchequer. To ease the people

ple of so heavy and arbitrary an imposition, the king required, that a civil officer of his appointment should be present, in all ecclesiastical courts, and should for the future give his consent to every composition made for spiritual offences. About this time also Henry had an opportunity of proceeding against the clergy on another footing. A clerk at Worcester-shire, having debauched a gentleman's daughter, murdered her father. The king required that the clerk should be delivered up to the magistrate. Becket pleaded the privileges of the church; confined the criminal in the bishop's prison, lest he should be seized by the king's officers; and maintained that no greater punishment could be inflicted on him than degradation. The king then required, that, immediately after he was degraded, he should be tried by the civil powers; but the primate asserted, that it was iniquitous to try a man twice upon the same accusation, and for the same crime. Upon this, Henry summoned an assembly of all the prelates in England; and put to them this decisive question, Whether or not they were willing to submit to the ancient laws and customs of the kingdom? The bishops unanimously replied, that they were willing, *saving their own order*. The king was justly provoked at this equivocal answer. He left the assembly with evident marks of displeasure; and required the primate instantly to surrender the castles of Eye and Berkham. The other prelates were terrified; but Becket continued inflexible: however, he was at last prevailed upon, by the interposition of Philip, the pope's legate and almoner, to retract the saving clause, and promise, without any reserve to observe the ancient customs. The king was not now to be satisfied with general promises from the clergy. He was determined that the ancient laws and customs should be defined, as well as the privileges of the clergy. He therefore summoned another great council of the clergy and nobility at Clarendon, to whom he submitted this important affair. Many regulations were there drawn up, which were afterwards well known by the title of the *Constitutions of Clarendon*. By these it was enacted, that clergymen accused of any crime should be tried in the civil courts; that laymen should not be tried in spiritual courts, except by legal and reputable witnesses; that the king should ultimately judge in ecclesiastical and spiritual appeals; that the archbishops and bishops should be regarded as barons, and obliged to contribute to the public expences like other persons of their rank; that the goods forfeited to the king, should not be protected in churches or church-yards by the clergy; and that the sons of villeins should not take orders without the consent of their lord. These, with some others of less consequence, to the number of 16, were subscribed by all the bishops present, and even by Becket himself; who, at first, showed some reluctance. Nothing now remained but to get the constitutions ratified by the Pope; but in this the king was disappointed. The pope rejected them with the utmost indignation; and, out of 16, admitted only six, which he thought were not important enough to deserve censure.—Becket was now mortified to the highest degree. He retracted his consent to the constitutions, redou-

bled his austerities, and even refused to execute any part of his sacerdotal function till he had obtained absolution from his holiness. Henry, considering these humiliations as insults offered to himself, desired the Pope to send him a legate. He did so; but annexed a clause to his commission, by which he was prohibited from acting against the archbishop of Canterbury. The king sat back the commission to the Pope; and being now exasperated beyond all patience, commenced furious prosecutions against Becket. He first sued him for some lands belonging to his primacy; and Becket being detained by sickness from coming into court, his non-attendance was construed into desertion. The primate afterwards defended his cause in person; but all his goods and chattels were confiscated, and the bishop of Winchester was obliged to pronounce the sentence. Another suit was commenced against him for L. 300, which he had levied on the honours of Eye and Berkham, and the primate agreed to give securities for the payment of the sum. The next day a 3d suit was commenced against him for 1000 marks, which the king had lent him; and, upon the back of these, a still greater demand was made; namely, that Becket should give an account of the money he had received and expended during the time he was chancellor. The money was computed at no less than 40,000 marks; and the primate, unable either to give an account, or to give securities, took the following extraordinary method of evading the king's designs. He arrayed himself in his episcopal vestments; and with the cross in his hand, went forward to the palace. Having entered the royal apartments, he sat down holding up the cross as his banner and protection. The king, who sat in an inner apartment, ordered by proclamation all the prelates and nobles to attend him; to whom he loudly complained of Becket's insolence. The whole council joined in condemning this instance of his unaccountable pride; and determined to expostulate with him about his inconsistency concerning the constitutions of Clarendon. But all these messages, threats, and arguments, were to no purpose. Becket himself, in the most solemn manner, under the protection of the supreme pontiff, and appealing to him against any penalty which his iniquitous judges might think proper to inflict. Then leaving the palace, he asked the king's immediate permission to quit Northampton; but being refused, he secretly withdrew in disguise, and a found means to cross over to the continent. Becket was received with the greatest marks of respect by the king of France (who hated Henry for account of his great power), and then by the Pope, whose cause he had so strenuously defended in England. Henry at the same time sent ambassadors to the Pope, who were treated with coolness and contempt, while Becket was honoured with the greatest marks of distinction. These favours bestowed upon an exile and a perjured traitor (such had been Becket's sentence of condemnation in England), irritated the king to such a degree that he resolved to throw off at once all dependence upon the Pope. He accordingly issued orders to his justices; inhibiting, under severe penalties, all appeals to the Pope or the arch-

stop; and forbidding any of them to receive mandates from them, or to apply to their authority. He declared it treasonable to bring over from either of them any interdict upon the kingdom. This he made punishable in secular clergymen by the loss of their livings, and by castration; in regulars, by the amputation of their feet; and in laymen, by death. On the other hand, the Pope and the archbishop did not fail to issue forth their ultimatums in such a manner as to shake the very foundations of the king's authority. Becket excommunicated by name all the king's chief ministers, who had been concerned in sequestering the revenues of his see; and all who obeyed or favoured the constitutions of Clarendon. He even threatened to excommunicate the king if he did not speedily repent; and had not the Pope himself been threatened every day with the machinations of an antipope, whose pretensions he was afraid the king of England might support, the sentence of excommunication would certainly have been denounced. At first, Henry paid little regard to these fulminations; but afterwards, when he found that his authority over his subjects was endangered by them, and that his rivals on the continent were endeavouring to disturb the tranquillity of his dominions, he began to wish for a reconciliation. This the Pope and Becket also became desirous of, when they found their utmost endeavours insufficient to draw Henry's subjects into a revolt. At length, by the mediation of the Pope's legate, all differences were adjusted, and Becket was reinstated in the see of Canterbury. On the recovery of his dignity, the primate behaved with all his usual arrogance. Instead of retiring quietly to his palace when he landed in England, he made a progress through Kent with all the splendor and magnificence of a sovereign pontiff. As he approached Southwark, the clergy, the laity, and ranks of people, came forth to meet him, and celebrated his triumphal entry with hymns of joy. Being thus confident of the support of the people, he resolved to make his enemies feel the severest effects of his vengeance. He suspended the Abp. of York, who had crowned Henry's eldest son in his absence. He excommunicated the bishops of London and Salisbury, with some of the principal nobility and prelates who had assisted at the coronation. One man he excommunicated for having taken against him, and another for having cut off the tail of one of his horses. The excommunicated prelates complained to the king; and he being dropped some passionate expressions, intimating a desire to have Becket's life taken away, he supposed will was instantly accomplished; nor could his express orders to the contrary arrive in time enough to hinder the assassination. See BECKET, No 2. The king was thrown into the utmost consternation on hearing of Becket's murder. He knew that the primate's death would accomplish what his most violent opposition during his life could never have done, and therefore he gave himself up to sorrow; for three days he even refused all nourishment; till at last his courtiers were obliged to break in upon his solitude, and induce him to acquiesce in an event which could not possibly be recalled. The pope was with some difficulty made sensible of the king's innocence;

but refused to grant him a pardon, except on condition that he should make every future submission and perform every injunction the holy see thought proper to demand. When things were thus adjusted, the assassins were allowed to retire in safety to the enjoyment of their former dignities; and the king, with a view to divert the minds of the people to a different object, undertook an expedition into Ireland, and totally reduced that island. See IRELAND. Henry was scarce freed from the war with Ireland, and the dangerous controversy which he had engaged in with the church of Rome, when he found himself involved in the most unnatural contests with his children, to whom he had always behaved in the most affectionate manner. He had ordered Henry his eldest son to be anointed king; and had destined him for his successor in England, Normandy, Anjou, Maine, and Touraine. Richard, his 2d son, was invested in the duchy of Guienne and county of Poitou: Geoffrey, his 3d son, inherited, in right of his wife, the duchy of Brittany: and the new conquest of Ireland was destined for John his 4th son, for whom he had negotiated a marriage with Adelais the only daughter of Humbert count of Savoy and Maurienne; and with whom he was to receive as a dowry very considerable demesnes in Piedmont, Savoy, Bresse, and Dauphiny. This greatness of Henry's family alarmed the king of France; and he therefore excited prince Henry to demand of his father, either the immediate resignation of the crown of England, or the duchy of Normandy. The king refused to comply with such an extravagant demand; upon which the prince made his escape to Paris, where he was protected by the French king. This happened in 1173; and the same year, queen Eleanor, finding that she was now grown very disagreeable to the king, communicated her discontent to her two younger children Geoffrey and Richard; whom she engaged also to demand the territories designed them, and then fly to the court of France. The queen herself was meditating an escape to the same court, and had put on man's apparel for that purpose, when she was seized and confined by Henry's order. The licentious barons in the mean time wished for a change of government; hoping to have liberty, under young and unexperienced princes, to commit those rapines which they could not do with safety, when governed by such a prudent and vigilant king as Henry. In the midst of this universal defection, however, the English monarch still retained his usual intrepidity, and prepared with as much vigour as possible for the contest. As he could depend on the fidelity of very few of his nobility, he was obliged to enlist in his service a number of desperate ruffians called *Brabançons*; (See BRABANCONES;) and 20,000 of these, with a few forces furnished by his faithful barons, composed the whole of Henry's army on this occasion. With these banditti, he totally overthrew the schemes of his enemies on the continent; but being desirous of putting an end to the war, he the same year (1173) agreed to a conference with the king of France. At this interview, Henry offered his children the most advantageous terms. He insisted only on retaining the sovereign authority in al-

his dominions. To Henry he offered half the revenues of the crown of England, with some places of surety in that kingdom; or if he chose rather to reside in Normandy, half the revenues of that duchy, with all those of Anjou. He made a like offer to Richard in Guienne; he promised to resign all Brittany to Geoffrey; and if these concessions were not deemed sufficient, he agreed to add to them whatever the Pope's legates, who were present, should require of him. The conference, however, was broke off by the violence of the earl of Leicester; who not only reproached Henry in the most indecent manner, but even put his hand to his sword, as if he intended to attempt some violence against him. In the mean time, the most of the English nobility united in opposition against their sovereign; and an irruption at this time by William king of Scotland assisted their rebellious schemes. The earl of Leicester soon after invaded Suffolk at the head of a body of Flemings; but they were repulsed with great slaughter, and the earl himself was taken prisoner. Soon after, the king of Scots, who had been repulsed, and agreed to a cessation of arms, broke the truce, and invaded England with an army of 80,000 men, committing the most terrible devastations. Henry in the mean time, to reconcile himself thoroughly to the church, performed the penances at the tomb of Becket, which he had formerly promised to do. As soon as he came within sight of the church of Canterbury, he alighted from his horse, walked barefoot towards the town, and prostrated himself before the shrine of the saint. He remained a whole day in prayer and fasting, watched the holy relics all night; made a grant of 50 l. a-year to the convent for a constant supply of tapers to illuminate the shrine; and not satisfied with these submissions, he assembled a chapter of monks, disrobed himself before them, put a scourge into each of their hands, and presented his bare shoulders to their strokes. Next day he received absolution; and, departing for London, had the agreeable news of the defeat and captivity of William king of Scotland, which had happened on the very day of his absolution. The victory proved decisive in Henry's favour. The English barons who had revolted, or were preparing for a revolt, instantly delivered up their castles to the victor, and the kingdom was in a few weeks restored to perfect tranquillity. Prince Henry, who was ready to embark with a great army to join the English rebels, abandoned all thoughts of the enterprise. Soon after a treaty was concluded with the king of France; in which Henry granted his children much less advantageous terms than he had offered them before. The principal were, some pensions for their support, castles for their residence, and an indemnity to all their adherents. The greatest sufferer by this war was William king of Scotland. He was compelled to sign a treaty, by which he obliged himself to do homage to Henry for the kingdom of Scotland. It was agreed, that his barons and bishops should do the same; and that the fortresses of Edinburgh, Stirling, Berwick, Roxburgh, and Jedburgh, should be delivered into the hands of the conqueror till the articles were performed. This treaty was executed most punctually and rigorously on the 10th Aug. 1175. The

king, barons, and prelates of Scotland, did homage to Henry in the cathedral of York; the greatest humiliation to which the Scottish nation had ever been subjected. Henry was now freed from all troubles either at home or abroad, for 5 years; during which time he made several salutary laws for the good of his kingdom. But, in 1180, the ambition of his children involved him in fresh calamities. Richard, who had been invested by his father with the sovereignty of Guienne, refused to do homage to his elder brother, and Henry had required him. Young Henry and Geoffrey, uniting their arms, invaded their father's dominions; and while the king was endeavouring to compose their differences, he found himself conspired against by them all. The conspiracy, however, was defeated by the death of prince Henry in 1183. He had retired to Martel, a castle near Turenne, where he was seized with a fever; and perceiving the approaches of death, he was struck with remorse for his undutiful behaviour towards his father. He sent a messenger to the king, who was not far distant, expressed his contrition for his faults; and intreated the favour of a visit, that he might at least die with the satisfaction of having received his forgiveness. The king, who had so often experienced his son's ingratitude and violence, apprehended that his sickness was entirely a feint, and dared not trust himself in the prince's hands. But soon after, receiving certain intelligence of his death, and proofs of his sincere repentance, the good old king was affected with the deepest sorrow. He thrice fasted away; he accused his own hard-heartedness in refusing the dying request of his son; and lamented that he had deprived the prince of the opportunity of making atonement for his offences. Prince Henry, who died in the 28th year of his age, left no posterity. His brother Richard succeeded to his dominions, and soon discovered a turbulent a spirit as that which had actuated his brother. He refused to give up Guienne, which Henry had designed for his 4th son John; and even made preparations for carrying on war against his father and brother Geoffrey. Henry sent Eleanor his queen, the heiress of Guienne; whom Richard, either dreading an insurrection in her favour, or out of a sense of duty, willingly yielded up the territory, and retired peaceably to his father's court. This breach, however, was no sooner made up, than Geoffrey, demanding Anjou to be added to his dominions in Brittany. This the king refused; upon which he fled to the court of France, and prepared to levy an army against his father, but was soon after killed in a tournament at Paris. The loss of this prince gave few, except the king, any uneasiness; for he was universally hated, and went among the people by the name of the *Child of Perdition*. The widow of Geoffrey, soon after his decease, was delivered of a son, named *Arthur*, who was invested in the duchy of Brittany, under the guardianship of Henry his grandfather, who, as duke of Normandy, was also superior lord of that territory. Philip II, king of France, as lord paramount, dispossessed for some time his title to this wardship; but was obliged to yield, the Bretons preferring the government of Henry. Some other causes in-
flamed

med the diffension between these two monarchs, Philip once more seduced Richard from his ty. He insisted that his marriage with Adelais, Philip's sister, should be immediately completed, and threatened to enforce his pretensions with a midable army. This occasioned another conference at the usual place of meeting, between Henry and Ric, under the great elm that is said have shaded more than an acre. In the midst of this conference the Abp. of Tyre appeared before the assembly in the most miserable habit, and begged assistance against the infidels, who, under Saladin, had almost totally expelled the Christians from Asia. His intelligence appeared so very desirable, that the kings of France and England laid aside their animosity, and both of them immediately took the cross. But Richard, who has long been to have all the glory of such an expedition himself, could not bear to have even his father a partner in his victories. He therefore entered into a confederacy with the king of France; so that Henry was at last obliged to give up all his rights of the crusade, to defend himself against an unnatural combination. The event of the proved very unfortunate for Henry, who lost all his towns, and narrowly escaped falling into the hands of the enemy himself. At last a treaty was concluded at the intercession of the duke of Burgundy, the count of Flanders, and the Abp. of Rheims; but upon terms very humiliating to the king of England. It was agreed, that Richard should marry the princess Adelais, and be crowned king of England during the lifetime of Henry; that Henry should pay 20,000 marks to the king of France, as a compensation for the expenses of the war; that his own barons should be obliged to make him observe this treaty, and in case of violating it, to join Philip and Richard against him; and that all his vassals who had espoused the cause of Richard should receive an indemnity. These terms, mortifying as they were, Henry bore with patience; but when, upon receiving a list of the barons that were to be paraded, he found his own son John, who was his favourite, among them, he could no longer suppress his grief. He broke out into the most lamentable expressions of despair; cursed the day which he received his miserable being; and bedewed on his ungrateful children a malediction which he could never afterwards be prevailed upon to retract. Soon after, he fell into a lingering fever occasioned by his grief; of which he died on the 6th July, 1189, in the 38th year of his age and 35th of his reign. His natural son, Geoffrey, who alone had behaved dutifully towards him, attended his corpse to the nunnery of Fontevault, where it lay in state in the abbey church. Next day Richard, who came to visit the dead body of his father, was struck with horror at the sight. At his approach, the blood gushed out at the mouth and nostrils of the corpse; and this accident was interpreted as the most awful rebuke. Richard could not endure the sight. He exclaimed that he was his father's murderer; and expressed a strong, though too late, remorse of his undutiful conduct.

14.) ENGLAND, HISTORY OF, TO THE DEATH OF KING RICHARD I. Richard I. succeeded his

father without opposition, and, on his accession, set his mother Eleanor (who had been again confined) at liberty. A romantic desire for adventures, and an immoderate zeal for the external rites of religion, were the ruling passions of the times. By the first of these Richard was inflamed to the highest degree, and therefore behaved as if the whole design of his government had been to attempt the recovery of the Holy Land from the Infidels. The superstition of the people showed itself in a most violent and tragical manner, on the very day of the king's coronation. The Jews were the objects of universal hatred, so that Richard had issued orders forbidding any of them from appearing at his coronation. But some of them bringing him large presents from their nation, presumed, notwithstanding these orders, to approach the hall in which the king dined. Being discovered, they were exposed to the insults and injuries of the bystanders; in consequence of which they fled, and were pursued by the people. A report was spread, that the king had given orders to massacre all the Jews. This supposed command was executed in the most cruel manner. Multitudes were slaughtered in the city of London, and this example was followed in most of the cities in England. Five hundred Jews had retired into York castle for safety: but finding themselves unable to defend the place, they murdered their wives and children; threw the dead bodies over the wall against their enemies who attempted to scale it; and then setting fire to the houses, perished in the flames. The gentry in the neighbourhood, who were all indebted to the Jews, ran to the cathedral where their bonds were kept, and made a solemn bonfire of them before the altar. Richard immediately began to take measures for his expedition into Palestine. His father had left him 100,000 marks; and this sum he augmented by all the expedients he could think of, however pernicious to the public, or dangerous to the royal authority. He set up to sale the revenues and manors of the crown, and several offices of the greatest trust and power. Liberties, charters, castles, were given to the best bidders. His friends warned him of the danger attending his venality; but he told them he would sell the city of London itself, if he could find a purchaser. Numerous exactions were also practised upon all ranks and stations; menaces, promises, and expostulations, were used to fright the timid, and allure the avaricious. A zealous preacher of those times was emboldened to remonstrate against the king's conduct; and advised him to part with his three daughters, pride, avarice, and sensuality. To this Richard readily replied, "You counsel right, my friend: and I have already provided husbands for them all. I will dispose of my pride to the templars; my avarice to the monks; and as for my sensuality, the clergy shall share that among them." At length the king having got together a sufficient supply, and even sold his superiority over Scotland for a moderate sum, set out for the Holy Land; whither he was impelled by repeated messages from the king of France, who was ready to embark in the same enterprise. An account of Richard's exploits in this expedition is given under the articles ACRA, N° 4. CYPRUS, N° 1. EGYPT,

EGYPT, § 18, &c.—Having at last concluded a truce with Saladin, he set out on his return for England. He was, however, at a loss how to proceed. He durst not return by the way he came, as this would have put him in the power of the king of France, between whom and the king of England an irreconcilable enmity had taken place. No way therefore was left, but by going more to the north; for which reason he took shipping for Italy, but was wrecked near Aquileia. From thence he travelled towards Ragusa, and resolved to make his way through Germany in the habit of a pilgrim. But his expences and liberality having betrayed him, notwithstanding this disguise, he was arrested by Leopold duke of Austria, who commanded him to be loaded with shackles. This prince had served under Richard at the siege of Acre, where having received some disgust, he took this base method of revenging himself. Henry VI. emperor of Germany, was then also an enemy to Richard, on account of his having married Berengaria, the daughter of Tancred king of Sicily. He therefore required the royal captive to be delivered up to him, and promised a large sum of money to Leopold, as a reward for his service. Meantime England was in great confusion. Richard had left it under the direction of Hugh bishop of Durham, and Longchamp bishop of Ely. The tempers of these prelates being very different, an animosity between them soon took place. Longchamp at last arrested his colleague, and obliged him to resign his power to obtain his liberty. The king, by many letters, commanded Longchamp to replace his coadjutor, but to no purpose. When the situation of the king became uncertain, Longchamp tyrannized to such a degree, that John the king's brother thought proper to oppose him. He then left the kingdom; and upon this the Abp. of Rouen was made justiciary in his room. The king of France, being informed of these dissensions, strove to increase them as much as possible; and had even almost prevailed upon John to throw off his allegiance, by promising to put him in possession of all Richard's continental dominions. When the English first received the news of Richard's captivity, a general indignation was excited through the whole nation. The greatest, and almost the only traitor, was the king's own brother John. On the very first invitation from the court of France, he went abroad, and held a consultation with Philip, the object of which was the perpetual captivity of his unhappy brother. He promised to deliver into Philip's hands a great part of Normandy; and, in return, he received the investiture of all Richard's transmarine dominions: it is even said, that he did homage to the French king for the crown of England. In consequence of this treaty, Philip invaded Normandy, and made considerable progress in the conquest of it. He was, however, at last repulsed by the Earl of Leicester, who was now returned from the Holy Land, and a truce was concluded on condition of paying the French king 20,000 merks, and putting four castles into his hands by way of security for the payment.—John, who had come over to England, met with still less success in his enterprises. He was only able to make

himself master of the castles of Windsor and Wexford; but when he came to London, and commanded the kingdom as heir to his brother, whose death he pretended to have received certain intelligence, he was rejected by all the barons, and measures were taken to oppose and frustrate him. The defence of the kingdom was well provided for, that John, after some fruitless efforts, was obliged to conclude a truce with opponents; and, before the expiration of it, thought proper to retire to France, where openly acknowledged his alliance with Philip. The efforts of Richard's enemies proved ineffectual to detain him in captivity. He was brought before the diet of the empire at Worms, where emperor Henry brought against him a charge of many crimes and misdemeanours: but to this king replied with so much spirit and eloquence, that the German princes exclaimed loudly against the conduct of the emperor; the Pope threatened him with excommunication; and Henry, who hearkened to the proposals of the king of France and prince John, found that it would be impossible for him to execute his and their base purposes, and detain the king of England any longer in captivity. He therefore concluded a treaty with him for his ransom; and agreed to restore him to his liberty for 150,000 merks, or £. 300,000 of our money, of which 100,000 were to be paid immediately, and 67 hostages delivered for the remainder. The money for the king's ransom was most cheerfully raised by the English. The churches and monasteries gave down their plate to the amount of 30,000 merks; the bishops, abbots, and monks, paid a fifth part of their yearly rent; the parochial clergy contributed a tenth part of their tithes; and the requisite sum being thus collected, queen Eleanor and Walter archbishop of Rouen set out for Germany, paid the money to the emperor and duke of Austria at Mentz, delivered the hostages for the remainder, and freed Richard from his captivity. His escape was very critical. He had been detected in the assassination of the bishop of Liege, and in an attempt of the duke of Louvaine; and finding himself extremely obnoxious to the German princes on account of these odious practices, he had terminated to seek support from an alliance with the French king, and to detain Richard in perpetual captivity, notwithstanding the sum he had already received for his ransom. He therefore ordered that Richard should be pursued and seized; but the king making all imaginable haste, already embarked at the mouth of the Scheldt, and was out of sight of land when the emperor's messengers reached Antwerp. The king of France no sooner heard of Richard's deliverance, than he wrote to John his confederate in these words: "Take care of yourself: the devil is broken loose." King Richard returned from captivity on the 19th of March 1194, and was received with the utmost joy by his subjects. He had been but one day landed, when his treacherous brother John came to make his submission. At the intercession of queen Eleanor he was received into favour, and forgave him (said the king,) and hope I shall easily forget his offences as he will my pardon.

hard was impatient to revenge himself on the
of France, and therefore instantly made war
on him. But though both kings were inflamed
the most violent resentment against each o-
they found it impossible to engage their
valuable barons heartily in their cause. The
therefore produced no remarkable event;
in 1195, was concluded by a truce for five
years. On some slight occasion it was ready to
break anew, when the pope's legate interpo-
sed, and a treaty was about to be concluded.
Richard in the mean time was wounded by
an arrow at the siege of Chalus, a castle of Limo-
usin. The wound was not in itself dangerous;
being unskilfully treated, a mortification en-
sued, and the king expired on the 6th April,
1199, in the 10th year of his reign and 42d of his
age. By his will he left the kingdom to his bro-
ther John, but distributed a fourth part of his
revenue among his servants.

1. ENGLAND, HISTORY OF, TO THE DEATH
OF JOHN. John succeeded to the crown of
England without opposition, but soon found his
government embarrassed on the continent. The king of
France, who, during the life of king Richard, had
supported the pretensions of John, now
gave him like support to the claims of prince Arthur
son of Geoffrey, who, though only 12 years of
age, was promised to be deservng of the kingdom.
In this matter the king of France showed so
much regard to his own interest, that Constantia
sister of the young prince, thinking that her
husband designed to keep for himself the provinces
which he pretended to conquer for Arthur, sub-
stituted herself and her son to John, who detained
her in Mans; and thus became undisputed mas-
ter of the whole empire. The new king was weak,
cruel, and treacherous. He was endow-
ed with almost every bad quality that can fall to
the share of man. His conduct, therefore, soon ren-
dered him universally odious. Imagining himself
secure on the side of France, he indulged him-
self in favouring Isabella, the daughter and heiress of
count of Angoulême. His queen, the heiress
of the family of Gloucester, was still alive; and
she was married to the count de la Marche,
who, by reason of her youth, the marriage had
been consummated. John persuaded the
count de Angoulême to carry off his daughter from
her husband, at the same time that he procured a
recess from the queen. Thus he incurred the dis-
pleasure of the pope, and also of the count de la
Marche, and a powerful confederacy was formed
against him. As John had neither courage nor
wisdom sufficient to keep his barons in awe, he
resorted to a method for that purpose equally base and
cruel. This was by hiring a set of ruffians, whom
he called his *champions*, to fight duels with them,
where they required to clear themselves of
any charge by fighting a duel. Thus he
succeeded to get rid of his refractory barons; but
despising opponents so far below their rank,
he continued to fight with them, and a dangerous com-
bination was formed amongst the barons against
him. The murder of prince Arthur rendered John
more generally detested. The young prince
and his mother had fled to the court of France,
where they were received with the greatest kind-

ness, and found their interests more vigorously
supported than before. Their enterprises were
attended with considerable success, when Arthur
himself had the misfortune to be taken prisoner.
All the other captives were sent to England; but
the prince was shut up in the castle of Falaise, and
from that time was never heard of. It was uni-
versally believed that John had murdered him with
his own hand; and this inflamed the general re-
sentment against him to such a degree, that he soon af-
ter lost all his French provinces. In 1205, the duchy
of Normandy itself was also conquered by Philip,
and John was forced to fly with disgrace to Eng-
land. The king resolved to wreak his vengeance
upon the barons, who, he pretended, had desert-
ed his standard in Normandy. For this reason,
he levied large sums on their estates; in order, as
he said, to undertake an expedition to the conti-
nent. This expedition, however, he several times
capriciously deferred; and once having ventured
out to sea, returned again without making the
smallest attempt. At last he landed at Rochelle,
and burnt the city of Angiers; but hearing that
the enemy were preparing to oppose him, he re-
turned without attempting any thing else. This
irresolute and cowardly behaviour of John made
him contemptible in the eyes of his subjects; but
the Norman princes had so far extended the pre-
rogatives of the English crown, that the barons,
however discontented, durst not yet attempt to
change the form of government. John, by enter-
ing into a controversy with the church, completed
his ruin. The clergy, who for some time had
acted totally independent of the civil power, had
their elections of each other generally confirmed
by the pope, to whom alone they owed subjec-
tion. The election of archbishops, however, had
been a subject of continual dispute between the
suffragan bishops and the Augustine monks. In the
mean time the Abp. of Canterbury died; and the
Augustine monks, in a very private manner, elec-
ted Reginald, their superior, in his place. The
bishops exclaimed against this election, as a
manifest innovation of their privileges; and a
furious theological contest was likely to ensue.
—John very imprudently took a side in this
controversy, and espoused the cause of the suf-
fragan bishops; in consequence of which, John
de Grey bishop of Norwich was chosen. The
cause was appealed to Rome; and Pope Innocent
III. seizing with avidity an opportunity of extend-
ing his power, commanded the monks to choose
cardinal Stephen Langton, an Englishman, then
at the court of Rome. The power of nominating
an archbishop of Canterbury (a person of almost
equal authority with the king), was an acqui-
sition that would give the court of Rome an un-
limited authority over England. John therefore
was resolved not to submit to this imposition; but
he had not judgment sufficient to conduct him.
He violently expelled the monks from their con-
vent, and seized upon their revenues. The pope,
perceiving from this absurd conduct, that John
was unequal to the task he had undertaken, after
some intreaties, threatened to put the whole king-
dom under an interdict. The prelates threw
themselves on their knees before the king, and in
the most earnest manner intreated him to avoid

the resentment of the holy tribunal, by receiving the primare, and restoring the monks to their convent. John, however, broke out into the most violent invectives. He swore by *God's teeth* (his usual oath), that if the kingdom was put under an interdict, he would banish the whole body of the clergy, and confiscate all their possessions. The pope at last, finding he might do it with safety, issued forth his terrible sentence so much dreaded by the whole nation. A stop was immediately put to divine service, and the administration of all the sacraments except baptism. The church doors were shut, and the images of the saints laid on the ground. The dead were refused Christian burial; and were thrown into ditches and on the highways, without any funeral solemnity. Marriage was celebrated in the church-yards, and the people prohibited the use of meat as in times of public penance. They were debarred from all pleasure, even from saluting each other, or paying any regard to their apparel. The clergy deplored the unhappy state of the nation in the most lamentable manner; while John, in revenge, imprisoned all their concubines, and treated the adherents of Langton with the utmost rigour. The furious efforts of John proved totally ineffectual. He had scarce a friend left in the whole nation; and therefore, in 1209, the pope denounced a sentence of excommunication against him. This was soon followed by another still more terrible; namely, the absolving all his subjects from their allegiance, and declaring every one to be excommunicated, who had any commerce with him at his table, council, or even in private conversation. The king, rendered quite furious by these repeated indignities, wreaked his vengeance on his unhappy subjects, whose affections he ought rather to have attempted to conciliate. The pope, therefore, proceeded to execute the full measure of his wrath on this devoted prince, by giving away his kingdom to Philip of France. He published a crusade all over Europe against king John; exhorting the nobility, the knights and men of every condition, to take up arms against him, and to enlist under the French banner. Philip was not less active on his part. He summoned all the vassals of the crown to attend him at Rouen; and having collected a fleet of 1700 vessels, was ready, in 1213, to invade England. The pope had now overstretched his power; and had the English nation been governed by a prince of any degree of prudence or resolution, the power of the clergy would in all probability have been totally broken. The people, however superstitious and ready to obey in matters of religion, could not tamely submit to be given away by the pope as slaves from one master to another; and therefore this consideration, added to the natural antipathy subsisting between the French and English, put John, notwithstanding all his offences, at the head of an army of 60,000 men. But the pope was too great a politician to suffer matters to be carried to extremities. He promised himself many more advantages from the submission of John than from an alliance with Philip; and therefore came over in person, or, according to some, sent over his legate, to England, under pretence of confer-

ring with the barons, but in reality to hold a conference with John. He there represented to the forlorn prince, the numbers of the enemy, the hatred of his own subjects, and the secret conspiracy there was against him in England. He intimated, that there was but one way to free him from the impending danger; namely, to place himself under the protection of the pope, who was a merciful father, and still willing to receive a repenting sinner. The abject and irresolute spirit of John submitted to this last piece of arrogance, he took an oath to obey whatever the pope should command. In consequence of this, he took another, the most extraordinary mentioned in the records of history; and which, as it taken while he commanded an army of soldiers, discovers a meanness of spirit almost indelible. The terms imposed by it were expressed in the following words: "I John, by the gift of God king of England and lord of Ireland, order to expiate my sins, from my own free will and the advice of my barons, give to the church of Rome, to Pope Innocent and his successors the kingdom of England, and all other privileges in my crown. I will hereafter hold the pope's vassal. I will be faithful to God, the church of Rome, to the pope *my master*, his successors legitimately elected. I promise to pay him a tribute of 1000 merks; to wit, for the kingdom of England, and 300 for the kingdom of Ireland." This oath was taken by king before all the people kneeling, and with hands held up between those of the legate. Having then agreed to reinstate Langton in the monarchy, he received the crown which he had supposed to have forfeited; while the legate added to his former insolence, trampled under foot the tribute which John had consented to pay. The king of France was enraged at this behaviour of the pope; and resolved to execute his purpose of conquering England, in spite of him and his censures. His fleet, however, was attacked in harbours by the English, who took 300 vessels destroyed about 100 more; while Philip found it impossible to prevent the rest from falling into the hands of the enemy, set fire to them himself, thus was obliged to give up all hopes of success. John, being thus freed from all danger, continued to follow the same cruel and tyrannical measures which had hitherto rendered him odious to his subjects. His scandalous subjection to the pope now gave the barons an opportunity of exerting themselves to reduce the enormous prerogative of the crown. Their designs were greatly facilitated by the concurrence of Langton the prince, who on all occasions showed a sincere regard to the interests of the kingdom. At a synod of prelates and clergy convened in St Paul's, on the pretence of examining into the losses of some bishops who had been exiled by John, he privately conferred with a number of barons, to whom he expatiated upon the vices and injustice of the reigning sovereign. He shewed them a copy of Henry I's charter; the only one in the kingdom, which had been buried in the rubbish of some obscure monastery. Langton exhorted the barons to insist on a renewal of it; and this they fol-

swore to perform. The same agreement was afterwards renewed at a more numerous meeting of barons summoned by Langton at St Edmundsbury. Here it was resolved, that at Christmas they would prefer their common petition in a body; and in the mean time they separated with a design to put themselves in a posture of defence, to arm men, and fortify their castles. In the beginning of January 1215, they repaired to London, accoutred in their military garb and equipment, and presented their petition to the king, alleging that he had promised to grant a confirmation of the laws of Edward the Confessor, at the time he was absolved from his excommunication. The king resented their presumption; and required a promise under their hands and seals, that they would never demand, or attempt to extort, such privileges for the future. This they refused with unanimity and resolution, that the king should give time to consider of their demands. He protested, that, at the festival of Easter, he would give a positive answer to their petition; and ordered them the Abp. of Canterbury, the bishop of Ely, and the earl marshal, as sureties for fulfilling his engagements. The barons accepted of securities, and departed peaceably; but John made no design of complying with their desires. He had recourse to the clergy, whose power he had seen and felt in so many instances. He courted their favour, by granting them a charter establishing all those rights of which they were already in possession, and which he now pretended to confirm when he had not the liberty to refuse. He ingratiated himself still farther with this body, took the cross, and appealed to the pope against the usurpation of the barons. The pope wrote letters to England, reproaching the prime and bishops with favouring these dissensions; and commanded them to promote peace between the parties. He exhorted the barons to conciliate the king, not with menaces, but with humilities; and promised, upon their obedience, to support his own authority in favour of such of their petitions as he should find to be just. At the same time he annulled their association, and bad them to enter into any confederacy for the future. The barons paid no regard to the pope's exhortations; knowing that the fulminations of the court of Rome would be of little avail, unless they were seconded by the clergy of England. They waited till Easter, when the king promised to return them an answer, they met by agreement at Runnymede. There they assembled a force of about 2000 knights, and a prodigious number of footmen. Thence they marched to Brackley, about twelve miles from Oxford, the place where the court resided. John hearing of the approach, sent the Abp. of Canterbury, the earl of Pembroke, and others of his council, to know the particulars of their request, and what those liberties were which they so much importuned him to grant. The barons delivered a schedule containing the chief articles of their demands, founded on the charters of Henry and Edward; but which were in the least degree displeasing to the king. He burst into a furious passion, asked the barons why they did not also demand his kingdom, and swore that he

would never comply with such exorbitant demands. The confederates then chose Robert Fitzwalter for their general; whom they dignified with the title of "Marechal of the army of God and of the holy church." They laid siege to Northampton, took Bedford, and were joyfully received into London. They wrote letters to all the nobility and gentry who had not yet declared in their favour, threatening their estates with devastation in case of refusal or delay. In the mean time the king was left at Oxford in Surrey attended only by seven knights. He vainly endeavoured to avert the storm by the mediation of his bishops and ministers. He appealed to Langton against the barons, not suspecting that he was engaged in the confederacy; and desired him to fulminate the church censures against those who had made war upon their lawful prince. Langton declared that he would pass no censure where he found no delinquent; but said, that much might be done, if the king would dismiss some foreign auxiliaries which he had lately brought over. Upon this John disbanded a great body of Germans and Flemings whom he had hitherto retained in his service, and Langton refused to excommunicate a single baron. The king, being now quite defenceless, was obliged at last to comply with the demands of his subjects. A conference was accordingly appointed, and all things were adjusted for this most important treaty. The king's commissioners met the barons at a place called RUNNY-MEAD, between Staines and Windsor; and which is yet held in reverence as the spot where the standard of freedom was first erected in England. Here the king signed the charter called *Magna Charta*; which continues in force to this day, and is still regarded as the great bulwark of British liberty. See *MAGNA CHARTA*. This charter, however, at the time that it was made, secured liberty to the clergy, barons, and gentlemen, much more than to the bulk of the people, who did not for a long time obtain any privileges of importance. Freedom of elections was secured to the clergy; and it was determined, that fines on them for any offence, should be laid on in proportion to the estates, and not the value of their benefices. The privileges secured to the barons were, either abatements in the rigour of the feudal laws, or relief from arbitrary and ambiguous decisions before the courts. It was also decreed, that barons should recover the lands of their vassals, even though forfeited by felony, after having been in possession of the crown for a year and a day; and no tax was to be imposed without consent of the great council of the nation, excepting in case of the captivity of the king, the knighting of his eldest son, or marrying his eldest daughter. No land belonging to any baron was to be seized for a crown debt, unless the possessor had not personal property enough to pay it; neither was any vassal to be allowed to sell so much of his land as to incapacitate him from performing the necessary service to his lord. It was also determined, that when the great council of the nation was called, the prelates, earls, and barons, should be summoned by a particular writ, and the lesser barons should receive a summons from the sheriff. In

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favour of the people it was stipulated, that they should have from the barons all the immunities and privileges granted by the king to the former. Merchants were to be allowed to carry on their business without any arbitrary tolls or impositions, and to go out of the kingdom and return at pleasure. The goods of every freeman were to be disposed of according to his will; or if he died intestate, the nearest heir should succeed him. No carts, horses, or wood, were to be taken by the crown officers without the consent of the owner. The king's courts were to be stationary, and no delay to be made in doing justice to every one; no freeman should be taken or imprisoned, dispossessed of his free tenement, outlawed or banished, unless by the legal judgment of his peers, &c. It was likewise stipulated, that London should remain in the hands of the barons, and the tower be consigned to the primate, till the 15th of August following; or till the articles of the charter should be fulfilled. To give the more security for this, the king allowed them to choose 25 of their own number, to whose authority no limits were set either in extent or duration. If any complaint were made of a violation of the charter, either by the king or his officers, any four of the barons might admonish the king to redress the grievance; and if satisfaction were not obtained, they might assemble the whole council of 25; and they, in conjunction with the great council, were empowered to compel him to fulfil the charter. In case of his resistance, they had liberty to levy war against him, attack his castles, and use every kind of violence, except against his person, or those of the queen or children. All men throughout the kingdom were bound, under the penalty of confiscation, to swear obedience to the 25 barons; and the freeholders of each county were to choose 12 knights, whose business it was to report such evil customs as ought to be redressed in terms of Magna Charta. But although John had thus obliged himself by writing, to allow liberty to his subjects, he had no mind that they should enjoy it in reality. The sense of his subjection to his own vassals sunk deep in his mind. He became sullen, silent, and reserved. He shunned the society of his former friends; and retired to the life of Wight, as if to hide his disgrace in solitude; but, in reality, to meditate revenge against the barons. He sent to the continent to enlist a great body of mercenary troops, and made complaints to the pope of the insurrections of the barons against him. The pontiff very warmly espoused his cause; a bull was sent over, annulling the whole charter; at the same time the foreign troops arriving, the king once more found himself in a condition to demand his own terms from his subjects. The barons had made no preparations for war, not suspecting the introduction of a foreign enemy. The king, therefore, was for some time undisputed master of the field, and the most horrid cruelties were committed by his army. The nobility who had been most active in procuring the great charter, fled with their families to Scotland, where they obtained the protection of king Alexander II. by doing homage to him. The barons being totally unable to raise an army capable of contending with that of John, applied to their old enemy

Philip of France, offering to acknowledge his eldest son Lewis for their sovereign, on condition of his protecting them from the fury of John and his mercenaries. The French king accepted their proposal with joy; and, 25 hostages which he demanded being sent over, began to make the most diligent preparations for this expedition, regardless of the menaces of the pope, who threatened him with excommunication, and actually excommunicated his son Lewis some time after. The first troop who came to the assistance of the barons, were only a body of 7000 men; but, soon after, Lewis with a powerful army landed at Sandwich. The first effect of this invasion was, that most of John's foreign troops deserted, refusing to fight against the heir of their monarchy. Many considerable noblemen left also his cause, and Lewis daily gained ground. This prince advanced to London, where the barons and burghers did him homage, and took the oath of allegiance after he had sworn to confirm the liberties and privileges of the people. His imprudence, however, in preferring on all occasions his French subjects to the English, soon excited a jealousy against him, which proved very prejudicial to his cause. This jealousy was greatly increased by the confession of the count de Melun, one of his courtiers, who declared on his death-bed, that it was Lewis's design to exterminate the English barons as traitors, and to bestow their dignities and estates upon his French subjects, on whose fidelity he could more safely rely. This caused a considerable desertion among Lewis's party; that John once more found himself in a condition to make an effort for his crown. He resolved to penetrate into the heart of the kingdom; and for this purpose, he departed from Lynn, and took the road towards Lincolnshire at the head of a great body of troops. His road lay along the shore, which was overflowed at high water; the king, not being apprised of this, lost all his carriages, treasure, and baggage by their immersion. He himself escaped with the utmost difficulty, arrived at the abbey of Swinestead; where, in grief for the loss he had sustained, and the distressed state of his affairs, threw him into a fever, which soon appeared to be attended with fatal symptoms. He died at Newark in the year 1216, 51st of his age, and 18th of his reign. He had two legitimate sons: Henry, who succeeded him on the throne, and was about nine years of age; and Richard, who was about seven. He left 3 daughters; Jane, married to Alexander II. of Scotland; Eleanor, married to the earl of Pembroke, and Isabella, married to the emperor Frederick II.

(26.) ENGLAND, HISTORY OF, TO THE DEATH OF K. HENRY III. When John died, the earl of Pembroke was marshal of England, and at the head of the army; and of consequence, in the midst of such turbulence, at the head of the state. He was a nobleman of great honour and fidelity, and had continued faithful to John in his greatest reverses of fortune. He now determined to support the authority of the infant prince Henry; and therefore carried him immediately to Gloucester, where the ceremony of coronation was performed in the presence of Gualo the legate and a

noblemen, by the bishops of Winchester and
 uth. The young prince was obliged to swear
 nity to the pope, and renew the homage which
 father had done for the kingdom; after which
 e earl of Pembroke was chosen protector. Till
 enry III. arrived at the years of maturity, the
 unctions of his reign can only be considered as
 acts of his tutors. Pembroke caused him grant
 new charter of liberties, consisting of the con-
 ditions exorted from John, with some altera-
 tions; and the next year it was renewed, with the
 dition of some other articles. Thus these famous
 arters were brought very nearly to the shape in
 hich they have ever since stood; and they were,
 ring many generations, esteemed the most sa-
 fely rampart to national liberty and independence.
 They secured the rights of all orders of men,
 y were anxiously defended by all, and became
 a manner the basis of the English constitution;
 and of contract, which both limited the author-
 y of the king, and ensured the conditional alle-
 giance of his subjects. Though often violated,
 y were still claimed and recalled by the nobili-
 ty and people; and as no precedents were suppo-
 sed that infringing them, they rather acqui-
 sed, than lost, authority, from the frequent at-
 tempts made against them, in several ages, by re-
 volutionary and arbitrary power. These charters were
 the use of by Pembroke as arguments to draw
 the malecontent barons from their allegiance
 to Lewis. He represented to them, that, what-
 soever jealousy they might have entertained against
 a late king, a young prince, the lineal heir of
 ancient monarchs, had now succeeded to the
 throne, without succeeding either to the resent-
 ments or principles of his predecessor: That the
 moderate expedient, which they had employed,
 calling in a foreign potentate, had, happily for
 the nation, as well as for the nation, failed of entire
 success; and it was still in their power, by a quick
 return to their duty, to restore the independence
 of the kingdom, and to secure that liberty for
 which they so zealously contended: That, as all
 the offences of the barons were now buried in
 oblivion, they ought, on their part, to forget their
 complaints against their late sovereign; who, if
 he had been anywise blameable in his conduct,
 he left to his son the salutary warning to avoid
 the paths, which had led to such fatal extremities:
 That, having now obtained a charter for their
 rights, it was their interest to show, by their
 conduct, that that acquisition was not incompati-
 ble with their allegiance; and that the rights of
 king and people, so far from being hostile and
 opposite, might mutually support and sustain each
 other. These considerations, enforced by Pem-
 broke's known character of constancy and fidelity,
 had a very great influence on the barons. Most
 of them began to negotiate with him, and many
 actually returned to their duty. Meantime Lewis
 continued to disgust those of his own party by the
 severity which he visibly gave to the French.
 Though he went over to France, therefore, and
 sought fresh succours, he found that his party
 was greatly weaker than before, by the desertion
 of his English confederates; and that the death of
 John had, contrary to his expectations, oc-
 casioned the total ruin of his affairs. In a short

time Pembroke was so much strengthened by de-
 serters from Lewis's party, that he ventured to
 invest Mount Sorel; though upon the approach
 of the count de Perche with the French army, he
 desisted from that enterprise. The French general
 immediately marched to Lincoln; and, being ad-
 mitted into the town, laid siege to the castle, and
 soon reduced it to extremity. Pembroke sum-
 moned his forces from every quarter, in order to
 relieve this important place; and he appeared so
 much superior to the French, that they shut them-
 selves up within the city, resolving to take shelter
 there. But the garrison of the castle, having re-
 ceived a strong reinforcement, made a vigorous
 sally upon the besiegers, while the English army
 assaulted them from without. The French army
 was totally routed; the count de Perche with
 only two persons more were killed; but many of
 the chief commanders, and about 400 knights,
 were made prisoners. On the news of this event,
 Lewis raised the siege of Dover, and retired to
 London; where he received intelligence of a new
 disaster, which put an end to all his hopes. A
 French fleet, which carried a strong reinforce-
 ment, had appeared on the coast of Kent; where
 they were attacked and repulsed with considerable
 loss, by Philip D'Albiny. He is said to have
 gained the victory by the following stratagem.
 Having got the wind of the French, he came
 down upon them with violence; and throwing on
 their faces a great quantity of quicklime, which
 he purposely carried on board, they were so blind-
 ed that they were disabled from defending them-
 selves. This misfortune so discouraged the barons
 who yet adhered to Lewis, that they came from
 every quarter to make their submission to Pem-
 broke; and Lewis himself, finding his affairs to-
 tally desperate, was glad to make his escape from
 a country where every thing was become hostile
 to him. He therefore concluded a peace with the
 Protector; promised to evacuate the kingdom;
 and only stipulated, in return, an indemnity to his
 adherents, and a restitution of their honours and
 fortunes, together with the free and equal enjoy-
 ment of those liberties which had been granted to
 the rest of the nation. When the king grew up,
 he was found to be very unfit for the government
 of such a turbulent people as the English at that
 time were. Though his temper was mild and
 humane, he was very weak, fickle, and irresolute.
 He disgusted the people by the caresses he bestow-
 ed on foreigners; and this disgust rose once to
 such a height, that the barons refused to assemble
 in the general council, at his desire. When com-
 manded to do so, they sent a message to Henry,
 desiring him to dismiss his foreigners; otherwise
 they would drive both him and them out of the
 kingdom, and put the crown on the head of one
 who was more worthy to wear it. Henry heaped
 riches upon his foreign favourites in a manner
 which he could by no means afford: this often
 brought him into very great straits; and to relieve
 himself, he was obliged to have recourse to many
 arbitrary measures, which he could not otherwise
 have chosen. Nothing, however, of great mo-
 ment happened till 1255, when the Pope embark-
 ed Henry in a scheme for the conquest of Naples,
 an enterprise which involved him for some years

in very great expense and trouble, as well as disgrace. The court of Rome some time before had reduced the kingdom of Sicily to the same state of feudal vassalage which she pretended to exercise over England; but Mainfroy, an usurper, under pretence of governing the kingdom for the lawful heir, had seized the crown, and was resolved to reject the Pope's authority. As the Pope found that his own force alone was not sufficient to gain his point, he had recourse to Richard E. of Cornwall, the king's brother, who had such talents for amassing money, that he was reckoned the richest prince in Christendom. To him the Pope offered the kingdom of Sicily, upon the single condition of his conquering it from the usurper. Richard was too wise to accept this offer; upon which the Pope applied to Henry, and offered him the crown of Sicily for his son Edmund. Henry, dazzled by this proposal, without reflecting on the consequences, or consulting his brother or the parliament, gave the Pope unlimited credit to expend whatever sums he thought necessary for the conquest of Sicily. In consequence of this grant, his holiness determined to exert his apostolical authority to the utmost, in extorting money from the English. A crusade was published, requiring every one who had taken the cross against the infidels, or even vowed to advance money for that purpose, to support the war against Mainfroy, whom he accused as being a more terrible enemy to the Christian faith than any Saracen. A tenth on all the ecclesiastical benefices in England was levied for 3 years; and orders were given to excommunicate the bishops who did not make punctual payment. A grant was made to the king of the goods of intestate clergymen, as well as of the revenues of vacant benefices and of non-residents. These taxations, however grievous, were submitted to with little murmuring; but another suggested by the bishop of Hereford excited the most violent clamours. This prelate, who at that time resided at Rome, drew bills on all the abbots and bishops of the kingdom, to the amount of no less than 150,540 merks, which he granted to Italian merchants in consideration of the money they had advanced for the support of the Sicilian war. As it was apprehended, that the English clergy would not easily submit to such an extraordinary demand, a commission was given to Rustand, the Pope's legate, to use his authority. An assembly of the prelates and abbots was accordingly summoned; who, on hearing the proposal sanctified with the names both of the Pope and King, were struck with the utmost surprise and indignation. A violent altercation took place; during which the legate told them, that all ecclesiastical benefices were the property of the Pope, and that he might dispose of them as he pleased. The affair ended, however, in the submission of the clergy; but the barons still continued refractory, and for some time answered the king's demands of supplies with expostulations; urging the king's partiality to foreigners, and the various injuries the nation had sustained from the servants of the crown. The great council of the nation, which had lately obtained the name of PARLIAMENT, was therefore dissolved, and another called, but with as little

success as before. The king, however, had involved himself in so much debt, that a large supply was become absolutely necessary; and as that could by no means be obtained from parliament, he was now reduced to the humiliating expedient of going about among such of his subjects as he thought most attached to him, and begging assistance from them at their own houses. At length his barons, perceiving the exigencies to which he was reduced, seemed willing to afford him aid; and, upon his promising to grant them a pleasant redress of grievances, a very liberal supply was obtained, for which he renewed their charter with more than usual solemnity. All the prelates and abbots were assembled with burning tapers in their hands; the magna charta was read in their presence; and they denounced sentence of excommunication upon all who should infringe upon their decisions. They then put out their tapers on the ground, and exclaimed, "May every soul that proves false to this agreement go stink and come in hell." The king subjoined, "So help me God I will inviolably keep all these things, as I am a man, as I am a Christian, as I am a knight, as I am a king crowned and anointed." No sooner had the king received the supplies of which he stood so much in need, than he forgot all his engagements, put his confidence entirely in his counsellors, and evaded or broke through in numberless instances the charters he had given. This conduct rendered him so obnoxious to the barons that Simon Mountfort E. of Leicester, a man of very violent and ambitious temper, determined to attempt an innovation in the government. He formed a powerful confederacy against the king, and the designs of the conspirators were effectually put in execution in 1258. Henry had summoned a parliament in expectation of receiving supplies for his Sicilian project; when the barons appeared in the hall, clad in complete armour, with their swords by their sides. The king, with this unusual appearance, asked them what was their purpose, and whether they pretended to make him their prisoner? Roger Bigod, Marshal, answered in name of the rest, that he was not their prisoner; that they even intended to grant him large supplies, in order to fix him on the throne of Sicily; that they only expected some return for this expence and service; and as the king had frequently made submission to the parliament, had acknowledged his past errors, and had still allowed himself to be carried into the same path, which gave them such reason of complaint, he must now yield to more strict regulations, and confer authority on those who were able and willing to redress the public grievances. Henry instantly assured them of his intention to grant them all possible satisfaction; and for that purpose summoned another parliament at Oxford to digest the new plan of government, and to select proper persons who were to be entrusted with the chief authority. This assembly, afterwards called the *mad parliament*, went very expeditiously to work on the business of reformation: 24 barons were appointed, with supreme authority to reform abuses, and Leicester was placed at their head. Their first step was to order 4 knights to be chosen out of each county, who should examine

to the state of their respective constituents, and could attend at the ensuing parliament to give information of their complaints. They ordained that three sessions of parliament should be regularly held every year; that a new high sheriff should be elected annually; that no wards nor assises should be entrusted to foreigners, no new offices made, nor the revenues of any counties let to farm. These constitutions were so just, that some of them remain to this day. But the parliament having thus obtained the sovereign power, took care not to part with it again. They not only protracted the time of their sitting under various pretences; but at last had the effrontery to impose an oath upon every individual of the nation, declaring an implicit obedience to all the statutes executed, or to be yet executed, by the persons who were thus appointed as rulers. They not only abridged the authority of the king, but the efficacy of parliament also; giving up to the barons the whole parliamentary power between each session.—Their usurpations were first opposed by the knights of the shire, whom they themselves had appointed. These had for some time begun to be regularly assembled in a separate hall, to consider of the national grievances; the first of which was the conduct of the 24 rulers, they represented, that though the king had permitted all that was required of him, the barons had hitherto done nothing on their part that showed an equal regard for the people; that their own interest and power seemed the only aim of all their measures; and they even called upon the king's eldest son prince Edward to interpose his authority, and save the sinking nation. The prince was this time about 22 years of age, and by his active and resolute conduct had inspired the nation with great hopes. He told those who made the application to him, that he had sworn to the late constitutions; and, on that account, though they were contrary to his own private opinions, he was bound not to infringe them. At the same time, however, he sent a message to the barons, requiring them to bring their undertaking to an end, otherwise to expect the most vigorous resistance to their usurpations. On this the barons were obliged to publish a new code of laws, which, though it contained scarce any thing material, yet, it was supposed, would for a while dazzle the eyes of the people, until they could take measures to establish their authority upon better foundations. In this manner, under various pretences, they continued their power for three years; while the whole nation loudly condemned their treachery, and the Pope at last absolved the king and his subjects from the oath they had taken to obey their injunctions. Soon after this, a parliament was called, and the king reinstated in his former authority. The barons were obliged to submit for a time; but the E. of Leicester having seized the Welsh, who at this time made an irruption into England, the kingdom was reduced to the most deplorable situation. The pusillanimity of the king prevented any proper or judicious method from being pursued for extricating the people from their distresses; and at last a treaty was concluded with the barons on the most

disgraceful and disadvantageous terms that can be imagined. They were restored to the sovereignty of the kingdom, took possession of all the royal castles and fortresses, and even named the officers of the king's household. They summoned a parliament to meet at Oxford, to settle the plan of government; and by this assembly it was enacted, that the authority of the 24 barons should continue not only during the life of king Henry, but also during that of prince Edward. These scandalous conditions would have been easily complied with by king Henry; but they were utterly rejected by prince Edward, and a civil war immediately ensued. The prince was at first successful; but, through his impetuosity, occasioned the loss of a great battle, in which his father and uncle were taken prisoners, and he himself was obliged soon after to surrender to the earl of Leicester. The king was now reduced to the most deplorable situation. His partisans were totally disarmed, while those of the earl of Leicester still kept themselves in an offensive posture. Leicester seized the estates of no fewer than 18 barons; engrossed to himself the ransom of all the prisoners; monopolized the sale of wool to foreign markets; and at last ordained that all power should be exercised by 9 persons, who were to be chosen by three others, or the majority of them; and these three were the earl of Leicester himself, the earl of Gloucester, and the bishop of Chichester. The miserable situation to which the kingdom was now reduced, proved at last the means of settling the government on a more proper foundation. Leicester, to secure himself, was obliged to have recourse to an aid, till now, entirely unknown in England, namely, that of the body of the people. He called a parliament, where, besides the barons of his own party, and several ecclesiastics who were not proper tenants of the crown, he ordered returns to be made of two knights from every shire; and also deputies from the boroughs, which had been hitherto considered as too inconsiderable to be allowed any share in the legislation. This parliament was called on the 20th Jan. 1265; and here we find the first outline of an English House of Commons; an institution which has ever since been justly considered as the bulwark of British liberty. The new parliament was far from being so compliant to Leicester as he had expected. Many of the barons who had hitherto steadfastly adhered to his party, were disgusted with his boundless ambition; and the people began to wish for the re-establishment of royal authority. Leicester at last, to make a merit of what he could not prevent, released prince Edward from his confinement, and had him introduced at Westminster-hall, where his freedom was confirmed by the unanimous voice of the barons. But though Leicester had all the popularity of restoring the prince, he was yet politic enough to keep him guarded by his emissaries, who watched all his actions. At last, however, he found means to make his escape. The D. of Gloucester, being disgusted with Leicester, retired from court, and went to his estates on the borders of Wales. His antagonist pursued him, and to give the greater authority to his arms, carried the king and prince

of

of Wales along with him. This furnished young Edward with the opportunity he had so long desired. Being furnished by the earl of Gloucester with an horse of extraordinary swiftness, he escaped from his guards, who were not able to come up with him; and the appearance of a body of troops belonging to Gloucester soon put an end to their pursuit. The prince no sooner recovered his liberty, than the royalists joined him from all quarters, and an army was soon procured which Leicester could not withstand. This nobleman now found himself in a remote quarter of the kingdom; surrounded by his enemies; and debarred from all communication with his friends by the river Severn, whose bridges Edward had broken down. In this extremity, he wrote to his son to hasten to his assistance from London, with a considerable army which he had under his command. With this view his son advanced to Kenilworth; but here he was surprised, and his army entirely dispersed by prince Edward. The young prince, immediately after this victory, advanced against Leicester himself; who, ignorant of the fate of his son's army, had passed the Severn in boats. He was by no means able to cope with the royalists; his men being inferior both in numbers and resolution to their antagonists. His army was defeated with great slaughter. Leicester himself was slain, though he called out for quarter, together with his eldest son Henry, and about 160 knights and other gentlemen. The old king had been purposely placed by the rebels in the front of the battle, where he was wounded, and in great danger of being killed; but, crying out, "I am Henry of Winchester your king," he was saved and put in a place of security by his son, who had run to his assistance. The body of Leicester being found among the dead, was barbarously mangled by one Roger Mortimer; and then sent to his widow, as a testimony of the royal party's success and barbarity. This victory, gained at Evesham, proved decisive in favour of the royal party. Almost all the barons hastened to make their submissions, and opened their gates to the king. The Isle of Axholme alone, and that of Ely, ventured to hold out, but were at last reduced, as well as the castle of Dover, by the valour of prince Edward. Adam de Gordon, a courageous baron, maintained himself for some time in the forests of Hampshire, and by his depredations obliged the prince to lead a body of troops against him. Edward attacked the camp of the rebels; and transported by the ardour of action, leaped over the trench with a few followers, and encountered Gordon himself in single combat. The victory was long disputed between these two valiant combatants; but ended at last in the prince's favour, who wounded his antagonist, threw him from his horse, and took him prisoner. He not only granted him his life; but introduced him that very night to the queen at Guildford, procured his pardon, and was ever after faithfully served by him. In 1271, prince Edward, having settled the affairs of the kingdom, undertook an expedition to the Holy Land, where he signalized himself by many acts of valour. The king's health declined visibly after the departure of his son; and at last, worn out with cares and the infirmities of age, he expired at St

Edmundsbury on the 16th Nov. 1272, in the 64th year of his age and the 56th of his reign.

(27.) ENGLAND, HISTORY OF, TO THE DEATH OF K. EDWARD I, OR IV. Prince Edward had reached Sicily in his return from the Holy Land, when he received an account of his father's death; at which he expressed much concern. As he knew that England was at that time in a state of perfect tranquillity, he was in no haste to return, but spent near a year in France before he made his appearance in England. He was received by his subjects with the utmost joy, and crowned at Westminster by Robert Abp. of Canterbury, on the 19th of August, 1274. He immediately applied himself to the correcting of those disorders which the civil commotions, and weak administration of his father, had introduced. A system of strict justice, bordering on severity, was introduced and kept up through the whole of his reign. The Jews were the only part of his subjects whom Edward oppressed. Many arbitrary taxes were levied upon them; 280 of them were hanged once for adulterating the coin; the goods of the rest were confiscated, and all of them banished the kingdom. In 1276, the king undertook an expedition against Llewellyn prince of Wales, who had refused to do homage for his crown. The conquest of that country was not fully accomplished till 1283; after which the principality of Wales was annexed to the crown of England, and thenceforth gave a title to the king's eldest son. (See WALES.) In 1286, the settlement of Wales appeared so complete, that the king went abroad in order to make peace between Alfonso III, king of Arragon and Philip IV. of France, who had a dispute about the kingdom of Sicily. He succeeded in his negotiations; but, staying abroad 3 years, he found that many disorders had been introduced in his absence. Many instances of robbery and violence had broke out in all parts of England; but the corruption of the judges, was of still more dangerous consequence. Edward summoned parliament, and brought the judges to a trial, where all of them except two, who were clergymen, being convicted, were fined, and deposed from their office. The amount of the fines levied upon them is a sufficient proof of their guilt, being above 100,000 merks; an immense sum in those days, which it was impossible they could obtain honestly. The king afterwards made all the judges swear that they would take no bribes; but the deposing and fining the old ones was the most effectual remedy. In 1293, king Edward began to meditate the conquest of Scotland, which employed him during the rest of his life; but which though that kingdom was by him reduced to the greatest distress, he was never able to accomplish. (See SCOTLAND.) At the same time, he was engaged in expensive contests with France; and these multiplied wars and preparations for war, by obliging him to have frequent recourse to parliamentary supplies, became the remote causes of great and important changes in the government. The parliament was modelled into the form which has continued ever since. As a great part of the property of the kingdom, by the introduction of commerce and improvements in agriculture, was transferred from the barons to the inferior ranks of

people, their consent was thought necessary for issuing the supplies. The king accordingly issued writs to the sheriffs, enjoining them to send to parliament, along with two knights of the shire, two deputies from each borough within their county, provided with sufficient powers from their constituents to grant such demands as they should think reasonable for the safety of the state. The urgency of these deputies were to be born by the wrongs which sent them; and so far were they not considering this deputation as an honour, at nothing could be more displeasing to any borough than to be thus obliged to send a deputy, to any individual than to be thus chosen. The poverty of these commoners, however, increased through time. Their union gave them weight; and it became customary among them, in return for the supplies which they granted, to present petitions to the crown for the redress of grievances. The more the king's necessities increased, the more he found it necessary to give them an easy redress; till, from requesting, the commons proceeded to demanding; and having all the property of the nation, they began also to be possessed of the power. Edward, commonly called the 1st, though in reality the 14th of the name, he is killed by Marcel, died of a dysentery at Harlow, on the 7th July, 1307, as he was leading his army into Scotland, against the inhabitants which he had vowed the most dreadful vengeance. He was succeeded by his son Edward, whom he had charged with his dying breath to prosecute the war against Scotland, and never to rest till he had finally subdued the kingdom. But a new king was of a very different disposition to his father. The Scots gradually recovered their power, and, in 1314, gave the English such a terrible defeat at Bannockburn, that for many years after, no superiority of numbers could encourage them to look the Scots in the face. See OTLAND.

18.) ENGLAND, HISTORY OF, TO THE DEPOSITION AND MURDER OF EDWARD II. Edward being a prince of a weak understanding, though loaded with no remarkable bad qualities, his reign was one continued series of quarrels with his turbulent subjects. His favourites were the most general causes of discontent. The first of these was Piers Gaveston, the son of a Gascon knight of no distinction, who had honourably served the king, and who, in reward for his services, had obtained an establishment for his son in the family of the prince of Wales. To be the favourite of a king, is no doubt a sufficient offence to the courtiers. Numberless faults were therefore found in Gaveston by the English barons. When the king went over to France to espouse the princess Isabella, to whom he had been long contracted, Gaveston was left guardian of the realm, with more ample powers than had usually been conferred. But when the queen, who was of an impetuous and intriguing spirit, arrived, Gaveston fell under her displeasure also, on account of his ascendancy over the king. A conspiracy was therefore formed against him, at the head of which were the queen, and the earl of Lancaster, cousin-german to the king and the most opulent and powerful nobleman in England. The king, unable to

resist such a combination, was at last obliged to banish Gaveston; but recalled him some time after. This was sufficient to spread an alarm over the whole kingdom: a civil war ensued; and the nobility, having got Gaveston into their hands, put him to death. After the unfortunate defeat at Bannockburn, Edward chose a new favourite named *Hugh le Despenser*, or *Spenfer*, a young man of a noble English family; some merit, and very engaging accomplishments. His father was a person of a much more respectable character than the son; but the being admitted to a share of the king's favour, was a sufficient crime. Edward dispossessed some lords of their estates, to bestow them upon this favourite; and this was a sufficient reason for openly attacking both the father and son. The earls of Lancaster and Hereford flew to arms. Sentence was procured from parliament of perpetual exile against the two Spensers, with a forfeiture of all their estates. At last the king took the field at the head of 30,000 men, and pressed the earl of Lancaster so closely, that he had not time to collect his forces together; and, flying from one place to another, he was at last stopped on his way towards Scotland, and made prisoner. He was immediately condemned by a court martial; and executed on an eminence near Pomfret, with circumstances of the greatest indignity. Spenfer now triumphed for some time over his enemies; most of the forfeitures were seized for his use, and he is said to have been guilty of many acts of rapine and injustice. But he was soon opposed by a more formidable enemy. Queen Isabella fled to France, and refused to return to England till Spenfer was removed from the court and banished the kingdom. Thus she made herself popular in England, where Spenfer was universally disliked, even at the very time she was carrying on a criminal correspondence with a young gentleman named *Mortimer*. Her court therefore became a sanctuary for all the malecontents who were banished, or who chose to come over. When she thought matters ripe for her purpose, she set sail from Dort harbour, accompanied by 3000 armed men. She landed without opposition on the coast of Suffolk, on the 24th Sept. 1326: and she no sooner appeared, than there seemed to be a general revolt in her favour. The unfortunate king found the spirit of disloyalty spread over the whole kingdom. He had placed some dependence on the garrison of Bristol, which was under the command of the elder Spenfer; but they mutinied against their governor, and that unfortunate favourite was delivered up, and condemned by the tumultuous barons to the most ignominious death. He was hanged on a gibbet in his armour; his body was cut in pieces and thrown to the dogs; and his head was sent to Winchester, where it was set on a pole, and exposed to the insults of the populace. Young Spenfer did not long survive his father. He was taken, with some others who had followed the fortunes of the wretched king, in an obscure convent in Wales. The queen had not patience to wait the formality of a trial; but ordered him to be immediately led forth before the insulting populace, and seemed to take a savage pleasure in beholding his distress. He was executed on a gibbet 50 feet high; his head

head was sent to London, where it was received by the citizens with brutal triumph, and fixed on the bridge. In the mean time the king, who hoped to find refuge in Wales, was discovered and delivered up to his adversaries, who insulted him in the grossest manner. He was conducted to the capital amidst the reproaches of the people, and confined in the Tower. A charge was soon exhibited against him; in which no other crimes but his incapacity to govern, his indolence, his love of pleasure, and his being swayed by evil counsellors, were objected against him. His deposition, however, was quickly voted by Parliament; he was assigned a pension for his support; his son Edward, a youth of 14, was chosen to succeed him, and the queen was appointed regent during the minority. The deposed monarch did not long survive the loss of his crown. He was at first confined to the custody of the Earl of Lancaster; but this nobleman showing some marks of respect and pity, he was taken out of his hands, and delivered over to the lords Berkeley, Mautravers, and Gournay, who were entrusted alternately, each for a month, with the charge of guarding him. While he was in Berkeley's custody, he was still used with some degree of humanity; but when the turn of Mautravers and Gournay came, every species of indignity was practised upon him, as if they had designed to accelerate his death by the bitterness of his sufferings. One day when Edward was to be shaved, they ordered cold and dirty water to be brought from a ditch for that purpose; and when he desired it to be changed, and was still denied his request, he burst into tears and exclaimed, that in spite of their insolence he would be shaved with clean and warm water. As his persecutors, however, saw that his death might not happen soon, and were daily afraid of a revolution in his favour, they determined to rid themselves of their fears by destroying him at once. Mortimer, therefore, secretly gave orders to the two keepers, instantly to dispatch the king; and these ruffians contrived to make the manner of his death as cruel and barbarous as possible. Taking advantage of Berkeley's sickness, which prevented him from attending the king, they came to Berkeley Castle and took possession of the king's person. They threw him on a bed, and held him down with a table which they had placed over him. They ran a horn pipe up his body, through which they conveyed a red-hot iron; and thus burnt his bowels without disfiguring his body. By this infernal contrivance they expected to have concealed their crime, but the king's horrid shrieks, which were heard at a distance from the castle, gave a suspicion of the murder; and the whole was soon after divulged by the confession of one of the accomplices. Gournay and Mautravers were held in destination by all mankind; and when the ensuing revolution deprived their protectors of power, they fled the kingdom. Gournay was at last seized at Marseilles, delivered over to the seneschal of Guienne, and put on board a ship with a view of carrying him over to England; but he was beheaded at sea, by secret orders, as was supposed, of some nobles and prelates in England, who were anxious to prevent any discovery which he might make of his accomplices. Mautravers concealed

himself for some years in Germany; but having rendered some services to Edward III. he ventured to approach his person, threw himself on his knees before him, and received a pardon.

(39.) ENGLAND, HISTORY OF, TO THE DEATH OF K. EDWARD III. By the murder of Edward II. the government fell entirely into the hands of the queen and her paramour Mortimer. The parliament, which raised young Edward to the throne had indeed appointed 12 persons as his privy council, to direct the operations of government. Mortimer excluded himself, under a show of moderation; but at the same time secretly influenced all the measures that came under their deliberation. As this influence began very soon to be perceived, and the queen's criminal attachment to Mortimer was universally known, these governors quickly became obnoxious to the people. The first stroke given to Mortimer's power was during an irruption of the Scots, when the favourite prevented the young king from attacking the enemy. Though it is very probable that the English army would have been destroyed, by making an attack on an army situated in such an advantageous post as the Scots at that time occupied, Mortimer incurred great blame on that account. He was accused of having allowed the Scots to make their escape; and the general disgust on this account was increased by his concluding a peace with that kingdom, wherein the English renounced all title to the sovereignty of Scotland for the sum of 30,000 marks. Soon after Mortimer seized and executed the earl of Kent, brother to the king; who, supposing Edward II. to be still alive, had formed a design of reinstating him in his kingdom. The execution was so sudden, that the young king had not time to interpose in his uncle's behalf; and Mortimer soon after seized this nobleman's estate for his own use, as he did also the immense fortunes of the Spenfers. Edward, finding the power of Mortimer a continual restraint upon himself, resolved to shake off an authority that was grown odious to the whole nation. The queen and Mortimer had for some time chosen the castle of Nottingham for their residence. It was strictly guarded, the gates were locked every night, and the keys carried to the queen. It was therefore agreed between the king and some of the barons, who secretly entered into his designs, to seize upon them in this fortress. William Eland the governor was induced to admit them through a subterraneous passage, which had been formerly contrived for an outlet, but was known only to one or two. Through this passage the noblemen in the king's interest entered the castle in the night-time; and Mortimer without having it in his power to make any resistance, was seized in an apartment adjoining to that of the queen. The parliament, which was then sitting, condemned him, without either permitting him to make his defence, or examining a single witness against him. He was hanged on a gibbet at a place called *Elmes*, about a mile from London. A similar sentence was passed against some of his adherents, particularly Gournay and Mautravers, who escaped as above mentioned. The queen, who was perhaps the most culpable of the whole, was screened by the dignity of her station.

lution. She was, however, deposed from all share of power; and confined for life to the castle of Basing, with a pension of 3000*l.* a-year. From his confinement she was never set free, though the king paid her an annual visit of ceremony. He lived 25 years after her deposition. Edward II. proved the greatest warrior that ever sat on the English throne. He first attempted to raise Edward Baliol to the sovereignty of Scotland; but as he found impossible fully to accomplish, Edward next formed a project of invading and conquering France, to the sovereignty of which he pretended a right. His first expectations were attended with so little success, that on his return to England he found the nation very much discontented, and himself harassed by his numerous creditors, without any sufficient resource for paying them. Being determined, however, not to take any blame himself, if he could throw it any where else, he took the first opportunity of wreaking his vengeance upon his subjects. Finding the tower of London negligently guarded on his arrival, he imprisoned the constable and all his inferior officers, treating them with the greatest severity. He then fell upon the sheriffs and collectors of the revenue, whom he dismissed from their employments, and appointed an enquiry into their conduct to be made by persons, who, knowing the king's humour, were sure to find every one guilty who came before them. The keeper of the privy seal, the chief justice, the mayor of London, the bishops of Chichester and Litchfield, with the chancellor and treasurer, were deposed and imprisoned. In this career of resentment and injustice, however, he found himself opposed by the bishop of Canterbury, whom he had appointed to collect the taxes for the support of the French army. That prelate, happening to be absent at the time of the king's arrival, did not immediately feel the effects of his resentment. Being informed, however, of the humour in which his sovereign was, he issued a sentence of excommunication against all who should exercise violence against persons or estates of clergymen, or who infringed those privileges secured by the great charter, or who should accuse a prelate of treason, or by other crime, in order to bring him under the king's displeasure. A regular combination was raised against the king by the clergy, with the aim at their head; who, to excite the indignation of the people as much as possible, reported, that the king intended to recal the general pardon and the remission of old debts which had been granted, and to impose new and arbitrary taxes without consent of parliament. The archbishop also, in a letter to the king, informed him, that there were two powers by which the world was governed, viz. the holy pontifical and ecclesiastical dignity and the regal authority; of which the clerical power was evidently the supreme, as the priests were to answer even for the conduct of kings at the last judgment; and were besides the spiritual fathers of all the faithful, kings and princes not excepted; having, besides, the heavenly charter, intitling them to direct their vices and actions, and to censure their transgressions. On this the king resolved to mortify him, by sending no summons to him when the parlia-

ment was called; but the prelate, undaunted by this mark of resentment, appeared before the gates of the parliament house with his crossier in his hand, demanding admittance as the first peer of the realm. This application was rejected for two days, but at last complied with; and the parliament now seemed inclined to abridge the king's authority considerably. They began with observing, that as the great charter had been violated in many points, particularly by the illegal imprisonment of many freemen and the seizure of their goods, it was necessary to confirm it anew, and to oblige all the chief officers of the law and others to swear to the observance of it. It was also required, that whenever any of the great offices became vacant, the king should fill them up by the advice of his council, and the consent of such barons as should at the time be found to reside in the neighbourhood of the court. They enacted also, that on the 3d day of every session the king should resume all such offices into his own hand, excepting those of the justices of the two benches and the barons of exchequer; that the ministers should for the time be reduced to private persons; that they should in that condition answer before parliament to any accusation preferred against them; and that, if they were found in any respect guilty, they should be finally deprived of their offices, and others appointed in their stead. In return for such ample concessions, the king was offered a grant of 20,000 sacks of wool; and such was his urgent necessity, that he was compelled to accept of it upon these terms. Still, however, he determined to adhere to his engagements no longer than till his necessity was removed. Though the agreement therefore was ratified in full parliament, he secretly entered a protest, that, as soon as his convenience permitted, he would from his own authority revoke what had been extorted from him. This protest was afterwards confirmed by a public edict; in which he asserted, that that statute had been made contrary to law; that it was prejudicial to the prerogatives of the crown, which he had only dissembled when he seemed to ratify it; and that in his own breast he had never assented to it: and declared, that from thenceforth it had no force or authority. This exertion of arbitrary power, which might have been expected to have occasioned a prodigious clamour, was not taken notice of by any of the subsequent parliaments; so that in the course of two years Edward had entirely regained his authority, and obtained a repeal of the obnoxious statute just mentioned. Having thus settled matters to his satisfaction, the king resumed his expedition against France, where he gained great advantages. In his absence the Scots invaded England; but were entirely defeated at Durham, and their king, David II, taken prisoner. Edward in the mean time continued his victories on the continent; in which he was greatly assisted by his son, Edward surnamed the *Black Prince*, the greatest hero recorded in the English annals. But for the wars of Edward III. and the exploits of this famous prince, see CRESSY, FRANCE, and SCOTLAND. The *Black Prince* died on the 8th of June 1376, and the king survived only about a year. He expired

on the 21st of June 1377, and was succeeded by his 2d son, Richard.

(30.) ENGLAND, HISTORY OF, TO THE DEPOSITION AND MURDER OF RICHARD II. Richard II. being only 11 years old when he ascended the throne, the government was vested in the hands of his three uncles the dukes of Lancaster, York, and Gloucester. The different dispositions of these noblemen, it was thought, would cause them check the designs of each other. Lancaster was neither popular nor enterprising; York was indolent and weak; and Gloucester turbulent, popular, and ambitious. Discontents first arose among the common people. They had now acquired a share of liberty sufficient to inspire them with a desire for more, and this desire was greatly encreased by the discourses of one John Ball, a seditious preacher. He went about the country, teaching that mankind were all derived from one common stock; and that all of them had equal right to liberty and the goods of nature, of which they had been deprived by the ambition of a few insolent rulers. These doctrines were greedily swallowed by the populace, who were farther inflamed by a new imposition of three groats a-head upon every person in the kingdom above 15 years of age. This had been granted as a supply by parliament, and was no doubt necessary on account of the many expensive wars in which the kingdom was engaged; but its evident injustice, in laying no more burden upon the rich than the poor, excited the utmost resentment of the people. The manner, too, of collecting this tax, soon furnished them with an occasion of revolt. It began in Essex, where a report was industriously spread that the peasants were to be destroyed, their houses burned, and their farms plundered. A blacksmith, well known by the name of *Wat Tyler*, was the first that excited them to arms. The tax-gatherers coming to this man's house while he was at work, demanded payment for his daughter. This he refused, alleging that she was under the age mentioned in the act. One of these fellows offered to produce a very indecent proof to the contrary, and at the same time laid hold of the maid. This the father resenting, immediately knocked out the ruffian's brains with his hammer. The bystanders applauded the action; and exclaimed that it was high time for the people to take vengeance on their tyrants, and to vindicate their native liberty. The whole country immediately took arms, and the insurgents soon amounted to about 100,000 men. They advanced to Blackheath, where they sent a message to the king; who had taken shelter in the tower, desiring a conference with him. The king was desirous of complying with their demands, but was intimidated by their fierce behaviour. In the mean time they entered the city, burning and plundering the houses of such as were obnoxious for their power or riches. Their animosity was particularly levelled against the lawyers, to whom they showed no mercy. The king at last, knowing that the tower was not able to resist their assaults, went out among them, and desired to know their demands. To this they made a very humble remonstrance; requiring a general pardon, the abolition of slavery, freedom of commerce in the market towns,

and a fixed rent instead of those services required by the tenure of villenage. The king granted all these requests; and charters were made out by which the grant was ratified. In the mean time, however, another body of the insurgents had broke into the tower, and murdered the chancellor, the primate, and the treasurer, with some other officers of distinction. They then divided themselves into bodies, and took up their quarters in different parts of the city. At the head of one of these was *Wat Tyler*, who led his men into Smithfield, where he was met by the king, who invited him to a conference under pretence of hearing and dressing his grievances. Tyler ordered his companions to retire till he should give them a sign, and boldly ventured to begin a conference with the king in the midst of his retinue. His demands were, That all slaves should be set free; that commonages should be open to the poor as well as to the rich; and that a general pardon should be passed for the late outrages. Whilst he made these demands, he now and then lifted up his fist in a menacing manner: which insolence raised the indignation of William Walworth lord mayor of London, that, without considering the danger to which he exposed his majesty, he struck Tyler with a blow of his mace; while one of the king's knights riding up, dispatched him with his sword. The mutineers, seeing their leader killed, prepared themselves to take revenge. Their bodies were already beat for execution; when Richard, though not 16 years of age, rode up to the rebels and with admirable presence of mind, cried out, "What, my people, will you kill your king? Be not concerned for the loss of your leader: myself will now be your general. Follow me into the field, and you shall have whatever you desire." The multitude immediately desisted, and followed the king into the fields, where he granted them the same charters that he had before granted to their companions. These charters, however, were soon after revoked, and the people reduced to the same situation in which they had formerly been. The courage, address, and the presence of mind, which Richard had discovered in quelling such dangerous tumult, gave great hopes to the nation; but, in proportion as he advanced in years, these hopes were blasted; and his want of capacity and judgment appeared in every enterprise he attempted. The king had lost the favour of the people; by allowing the parliament to revoke the charters of enfranchisements and pardon which had been granted; some of the ringleaders in the late disorders had been severely punished, and even put to death without any form of process or trial. The popular leaders were greatly exasperated by this cruelty, though probably the king did not follow the dictates of his own mind to do thus in it; as the advice of his counsellors. But having thus lost the favour of one party, he quickly fell under the displeasure of the other also. Supposing himself to be in too great subjection to his uncles, particularly the duke of Gloucester, he attempted to shake off the yoke, by raising others to such a degree of power as might enable them to rival them. His first favourite was Robert de Vere earl of Oxford, a young man of an agreeable person, but dissolute in his behaviour, who

soon acquired an absolute ascendant over him. So much was he determined to show his attachment to this nobleman, that he first created him marquis of Dublin, a title never known in England before; then duke of Ireland; transferring to him the entire sovereignty of that island by patent for life. He gave him in marriage his cousin German, the daughter of the earl of Bedford; but soon after permitted him to divorce her for another lady with whom he had fallen in love. This nobleman soon became the dispenser of all the king's favours to such a degree, that a conspiracy was formed against him; at the head of which were, Mowbray earl of Nottingham, Fitz-Alan earl of Arundel, Percy earl of Northumberland, Montague earl of Salisbury, and Beauchamp earl of Warwick. Vere was impeached in parliament; and though nothing of moment was even alleged against him, he was condemned and deprived of his office. They next proceeded to attack the royal authority itself. Under pretence that the king was yet unable to govern the kingdom, though that time 21 years of age, they appointed a commission of 14 persons to whom the sovereignty was to be transferred for a year. This measure was driven forward by the duke of Gloucester, and none but his own faction were admitted as members of the committee. The king could not without regret perceive himself thus totally deprived of authority. He first endeavoured to gain over the parliament to his interests, by influencing the chiefs of each county, who were then the only returning officers. This measure failing, he next applied to the judges. They declared, that the commission which had deprived the king of his authority was unlawful, and those who procured it advised it were punishable with death. Their sentence was quickly opposed by declarations from the lords. The duke of Gloucester armed his artisans; and appeared at Haringay park near Hingate, at the head of a body of men sufficient to intimidate the king and all his adherents. These seditious, sensible of their own power, began by demanding of the king the names of those who advised him to his late rash measures. A few days afterwards they appeared armed in his presence, and accused by name the Abp. of York, the duke of Ireland, the earl of Suffolk, and Sir Robert Tresilian, one of the judges who had declared in his favour, together with Sir Nicholas Bember, as public and dangerous enemies to the state. The duke of Ireland fled into Cheshire, where he attempted to raise a body of forces; but was quickly obliged to fly into Flanders, on the arrival of the duke of Gloucester with a superior army. Soon after, the king was obliged to summon a parliament, where an accusation was drawn up against five of his counsellors. Of these, only Sir Nicholas Bember was present; and he was quickly found guilty, condemned, and executed, together with Sir Robert Tresilian, who had been discovered and taken during the interval. Lord Beauchamp of Holt was soon after condemned and executed; and Sir Simon Burley who had been appointed by the king's governor, shared the same fate, though the queen continued for three hours on her knees before the duke of Gloucester, im-

ploring his pardon. Such unparalleled insolence and barbarity in a subject could not pass unpunished. In 1389, the king, at an extraordinary council of the nobility assembled after Easter, to the astonishment of all present, desired to know his age. Being told that he was turned of two and twenty, he alleged that it was then time for him to govern without help; and that there was no reason why he should be deprived of those rights which the meanest of his subjects enjoyed. The lords answered in some confusion, that he had certainly an undisputed right to take upon himself the government of the kingdom. "Yes (replied the king), I have long been under the government of tutors; and I will now first show my right of power by their removal." He then ordered Thomas Arundel, whom the commissioners had lately appointed chancellor, to give up the seals; which he next day delivered to William Wickham bishop of Winchester. He next removed the duke of Gloucester, the earl of Warwick, and other lords of the opposition, from the council; and all the great officers of the household, as well as the judges, were changed. The king being thus left at liberty to govern as he thought proper, for some time behaved in such a manner as to gain the affections of the people. It does not appear indeed, that he ever gave much cause of complaint; but it was impossible for any prince in those days to keep himself secure on the throne, but by a very severe and vigorous administration. The duke of Gloucester, perceiving that Richard was not of a warlike disposition, frequently spoke with contempt of his person and government, and deliberated concerning the lawfulness of throwing off all allegiance to him. The king being informed of his conduct by spies appointed for that purpose, at last formed a resolution of ridding himself of Gloucester and his factions at once. He therefore ordered that nobleman to be immediately arrested and sent over to Calais, where there was no danger of his being rescued by his numerous adherents. The earls of Arundel and Warwick were seized at the same time; and a new parliament, which the king knew would be perfectly obedient to his will, was summoned to Westminster. Here the commission of fourteen who had usurped the royal authority, was annulled for ever; all those acts which had condemned his former ministers were repealed; and the general pardon, which the king had formerly given, when he assumed the government into his own hands, was revoked. Several of Gloucester's party were condemned and executed, and at last that nobleman himself was called for to take his trial; but he had before been privately dispatched in prison. After the destruction of the duke of Gloucester and the heads of his party, a misunderstanding arose among the noblemen who had joined in the prosecution. The duke of Hereford appeared in parliament, and accused the D. of Norfolk of having spoken seditious words against his majesty, in a private conversation. Norfolk denied the charge, gave Hereford the lie, and offered to prove his innocence by single combat. The challenge was accepted; but on the day appointed for the duel, the king

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would

would not suffer the combatants to engage, but commanded both of them to leave the kingdom. The duke Norfolk he banished for life, but the duke of Hereford only for ten years. The former retired to Venice, where in a short time he died of a broken heart. Hereford behaved in a resigned and submissive manner; which so pleased the king, that he consented to shorten the time of his banishment four years: he also granted him letters patent, ensuring him of the enjoyment of any inheritance which should fall to him during his absence; but upon the death of his father the duke of Lancaster, which happened shortly after, Richard revoked these letters, and kept the estate to himself. This last injury inflamed the resentment of Hereford to such a degree, that he formed a design of dethroning the king. He was a great favourite both with the army and people; he was immensely rich, and connected by blood or alliance with all the great families of the nation. The king at the same time, it is said, gave himself up to an idle, effeminate life; and his ministers following his example, the national honour was lost. The number of malecontents daily increased, and only waited for the absence of the king, in order to put their schemes in execution; and this opportunity soon offered. The earl of March, presumptive heir to the crown, having been appointed the king's lieutenant in Ireland, was slain in a skirmish with the natives of that country; which so incensed Richard, that, unmindful of his precarious situation at home, he went over to Ireland with a considerable army, in order to revenge his death in person. The duke of Lancaster (for that was the title which Hereford assumed on the death of his father) hearing of the king's absence, instantly embarked at Nantz; and with a retinue only of 60 persons in three small vessels, landed at Ravenspur in Yorkshire. The earl of Northumberland, who had long been a malecontent, together with Henry Percy his son, who from his ardent valour was surnamed *Hosspur*, immediately joined him with their forces; and the people flocked to him in such numbers, that in a few days his army amounted to 60,000 men. Richard, in the mean time, continued in perfect security in Ireland. Contrary winds for three weeks together prevented his receiving any news of the rebellion which was begun in his native dominions. He landed therefore at Milford Haven without suspicion, attended by a body of 20,000 men; but immediately found himself opposed by a power which he could by no means resist. His army gradually deserted, till at last he was obliged to acquaint the duke, that he would submit to whatever terms he pleased to prescribe. The duke did not think proper to enter into any treaty with him; but carried him to London, where he was confined close prisoner in the Tower, formally deposed by parliament, or rather by the duke of Lancaster, and at last put to death. The manner of his death is variously related. According to some, 8 or 9 ruffians were sent to the castle of Pomfret, whither the unhappy prince had been removed, in order to dispatch him. They rushed unexpectedly into his apartment; but Richard, knowing their design, resolved to

sell his life as dear as possible. He wrested a pole-ax from one of the murderers, with which he killed 4 of them; but was at length overpowered and killed. Others relate that he was starved in prison; and that, after he was denied all nourishment, he prolonged his life 14 days, by feeding on the stocks of his bed. He died in 1399, in the 34th year of his age, and 23d of his reign. During his reign, Wickliff, the famous reformer, published his doctrines in England. See WICKLIFF.

(31.) ENGLAND, HISTORY OF, TO THE DEATH OF HENRY IV. After sentence of deposition had been pronounced on Richard by both houses of parliament, the throne being vacant, the duke of Lancaster stepped forth; and having crossed himself on the forehead and on the breast, and called on the name of Christ, gave in his claim to the throne "in the name of Father, Son, and Holy Ghost as descended by right line of blood from Henry III." This claim was founded on a false story that Edmund earl of Lancaster, son of Henry III. was really the eldest brother of Edward I.; but that by reason of some deformity in his person, he had been postponed in the succession, and Edward the younger brother imposed on the nation in his stead. The duke of Lancaster inherited from Edmund, by his mother, the right which he had pretended to the crown; though the falsehood of the story was so generally known, that he thought proper to mention it only in general terms. No opposition, however, was made to the validity of his title in parliament; and thus commenced the differences between the houses of York and Lancaster, which were not terminated but by many bloody and ruinous wars. The reign of Henry IV. was little less than a continued series of insurrection. In the very first parliament he called, no fewer than 40 challenges were given and accepted by different barons; and though Henry had ability and address enough to prevent these duels from being fought, it was not in his power to prevent continual insurrections and combinations against himself. The most formidable one was conducted by the earl of Northumberland, and commenced A. D. 1402. The occasion of it was, that Henry denied the earl liberty to ransom some Scottish prisoners, who had been taken in a skirmish with that nation. The king was desirous of detaining them in order to increase his demands upon Scotland in making peace; but as the ransom of prisoners was in that age looked upon as a right belonging to those who had taken them, the earl thought himself injured. The injury appeared the greater, that Northumberland considered the king as indebted to him both for his life and crown. He resolved therefore to dethrone Henry; and to raise to the throne young Mortimer, who was the true heir, being the son of Roger Mortimer earl of March, whom Richard II. had declared his successor. For this purpose he entered into an alliance with the Scots and Welsh, who were to make an irruption into England at the same time that he himself was to raise what forces he could to join them. But when all things were prepared for this insurrection, the earl found himself unable to lead on the troops, by a sudden fit of illness with which he was seized at Berwick. On this

ing Piercy (surnamed *Hoffpur*) took the command; and marched towards Shrewsbury, in order to join the Welsh. But the king had happily a small army with which he intended to have acted against the Scots; and knowing the importance of unity in civil wars, instantly hurried down, to battle to the rebels. He approached Shrewsbury before a junction with the Welsh could be effected; and the impatience of Piercy urged him in engagement, which at that time he ought to have declined. The evening before the battle, sent a manifesto to Henry; in which he renounced his allegiance, set the king at defiance, and enumerated all the grievances of which he imagined the nation might justly complain. He reproached (and very justly) with perjury; for Henry, on first landing in England, had sworn upon the gospels, before the earl of Northumberland, that he had no other intention but to recover possession of the duchy of Lancaster, and that he would remain a faithful subject to king Richard. He aggravated his guilt, in first dethroning and murdering that prince; and in usurping the title of the house of Mortimer; to whom, by lineal succession and by the declarations of parliament, the throne, then vacant by Richard's death, of right belonged. Several other heavy charges were brought against him; which, at that time, were productive of no other effect than to excite the king and his adherents to the utmost exertions on each side were in number about 100; so that they were not unmanageable by their commanders; and as both leaders were men of known bravery, an obstinate engagement was expected. The battle was fought on the 20th of May 1403; and we can scarce find in those ages another in which the shock was so terrible and instant. At last Piercy being killed by an unknown hand, the victory was decided in favour of the royalists. There are said to have fallen on that day near 2300 gentlemen, and 6000 private men, of whom near two thirds were of Piercy's army. The earl of Northumberland having recovered from his sickness, and levied an army, upon his march to join his son; but being opposed by the earl of Westmoreland, and hearing of the defeat at Shrewsbury, he dismissed his forces, and came with a small retinue to the king at York. He pretended that his sole intention was to mediate between the contending parties; and the king thought proper to accept of his apology, and grant him a pardon for his offence. The other rebels were treated with equal lenity; and none of them, except the earl of Worcester and Richard Vernon, who were regarded as the chief authors of the insurrection, perished by the hands of the executioner. This lenity, however, was not sufficient to keep the kingdom quiet; the insurrection followed another almost during the whole of this reign; but either through Henry's vigilance, or the bad management of the contrivers, they never could bring their projects to effect. This reign is remarkable for the first capital punishment inflicted on a clergyman of high rank. The Abp. of York having been concerned in an insurrection against the king, and happening to be taken prisoner, was beheaded without either judgment, trial, or defence; nor was any disur-

bance occasioned by this summary execution. But the most remarkable transaction of this reign was, the introduction of that absurd and cruel practice of burning people on account of their religion. Henry, while a subject, was thought to have been very favourable to the doctrines of Wickliff; but when he came to the throne, finding his possession of it very insecure he thought superstition a necessary implement of his authority, and therefore determined by all means to pay court to the clergy. There were hitherto no penal laws against heresy; not indeed through the toleration of the court of Rome, but through the stupidity of the people who could not perceive the absurdities of the established religion. But when the learning and genius of Wickliff had once broke the fetters of prejudice, the ecclesiastics called aloud for the punishment of his disciples; and Henry resolved to gratify them. He engaged parliament to pass a law for this purpose: it was enacted, that when an heretic, who relapsed, or refused to abjure his opinions, was delivered over to the secular arm by the bishop or his commissaries, he should be committed to the flames before the whole people. This weapon did not remain long unemployed in the hands of the clergy. William Sautré, rector of St Osththas in London, had been condemned by the convocation of Canterbury; his sentence was ratified by the house of peers; the king issued his writ for the execution; and he was burnt alive in 1401. The doctrines of Wickliffe, however, gained ground very considerably in England. In 1405, the commons, who had been required to grant supplies, proposed to the king to seize all the temporalities of the church, and employ them as a perpetual fund to serve the exigencies of the state. They insisted that the clergy possessed a third of the lands of the kingdom; that they contributed nothing to the public burdens; and that their exorbitant riches tended only to disqualify them from performing their ministerial functions with proper zeal and attention. When this address was presented, the Abp. of Canterbury, who then attended the king, objected that the clergy, though they went not in person to the wars, sent their vassals and tenants in all cases of necessity; while at the same time, they themselves who staid at home were employed night and day in offering up their prayers for the happiness and prosperity of the state. The speaker answered with a smile, that he thought the prayers of the church but a very slender supply. The archbishop, however, prevailed in the dispute; the king discouraged the application of the commons; and the lords rejected the bill which the lower house had framed for despoiling the church of her revenues. The commons were not discouraged by this repulse. In 1410, they returned to the charge with more zeal than before. They made a calculation of all the ecclesiastical revenues, which, by their account, amounted to 485,000 marks a-year, and included 18,400 ploughs of land. They proposed to divide this property among 15 new earls, 1500 knights, 6000 esquires, and 100 hospitaliers; besides L.20,000 a-year, which the king might keep for his own use; and they insisted that the clerical functions would be better performed than they were, by 15,000 parish priests,

at the rate of 7-merks a-piece of yearly stipend. This application was accompanied with an address for mitigating the statutes against the Wickliffites or Lollards, so that the king knew very well from what source it came. He gave the commons, however, a severe reply; and further to satisfy the church that he was in earnest, ordered a Lollard to be burnt before the dissolution of parliament. The king for some time had been subject to fits, which continued to increase, and gradually brought him to his end. He expired at Westminster in 1413, in the 46th year of his age, and 13th of his reign.

(32.) ENGLAND, HISTORY OF, TO THE DEATH OF HENRY V. Henry IV. was succeeded by his son Henry V. whose martial talents and character had at first occasioned unreasonable jealousies in the mind of his father, so that he thought proper to exclude him from all share of public business. The active spirit of Henry being thus restrained from its proper exercise, broke out in every kind of extravagance and dissipation. It is even reported, that, when heated with liquor, he scrupled not to accompany his riotous associates in attacking passengers on the streets and highways, and robbing them. No sooner, however, did he ascend the throne, than he called together his former companions, acquainted them with his intended reformation, exhorted them to imitate his example; but strictly prohibited them, till they had given proofs of their sincerity in this particular, to appear any more in his presence: after which, he dismissed them with liberal presents. His father's wise ministers, who had checked his riots, found that they had, without intention, been paying the highest court to their sovereign; and were received with all the marks of favour and confidence. The chief justice, who had formerly imprisoned the prince himself, and therefore trembled to approach the royal presence, met with praises instead of reproaches for his past conduct, and was exhorted to persevere in the same rigorous and impartial execution of the laws. The king was not only anxious to repair his own misconduct, but also to make amends for those iniquities, into which policy or necessity of affairs had betrayed his father. He expressed the deepest sorrow for the fate of king Richard, and even performed his funeral obsequies with pomp and solemnity, and heaped favours upon all those who had shown themselves attached to him. He took into favour the young earl of March, though his competitor for the throne; and gained so far on his gentle and unambitious nature, that he remained ever after sincerely attached to him. The family of Piercy was restored to its fortune and honours; and the king seemed desirous to bury all distinctions in oblivion. Men of merit were preferred, whatever party they had been of; all men were unanimous in their attachment to Henry; and the defects of his title were forgot amidst the personal regard which was universally paid him. The only party which Henry was not able to overcome was the new sect of Lollards. These reformers were now gaining such ground in England, that the Romish clergy were greatly alarmed, and Henry resolved to execute the laws upon them. The head of that party was Sir John Old-

castle, Lord Cobham; a nobleman who had distinguished himself by his valour and military talents on many occasions, and acquired the esteem both of the late and present king. His high character and zeal for the new sect pointed him out to Arundel Abp. of Canterbury, as a proper object of ecclesiastical fury, and therefore he applied to Henry for permission to indict him. The king desired him first to try gentle methods, and undertook to converse with Lord Cobham himself upon religious subjects. He did so, but could not prevail, and therefore abandoned Cobham to his enemies. He was immediately condemned to the flames: but having found means to make escape, he raised an insurrection; which was suppressed, without any other consequence than that of bringing a stain on the sect to which he belonged. Lord Cobham himself made his escape but 4 years afterwards was taken and executed. Immediately after, the most severe laws were enacted against the Lollards. It was enacted, that whoever was convicted of Lollardy, besides suffering capital punishment according to the law formerly established, should also forfeit his lands and goods to the king; and that the chancellor, treasurer, justices of the two benches, the justices of the peace, and all the chief magistrates in every city and borough, should take an oath to use their utmost endeavours for the extirpation hereof. Notwithstanding these terrible laws, the next parliament which enacted them, viz. the 1414, when the king demanded a supply, renewed the offer formerly pressed upon Henry IV. intreated the king to seize all the ecclesiastical revenues, and convert them to the use of the crown. The clergy were greatly alarmed. They offered the king nothing of equal value. They agreed, however, to confer on him all the prebendal alien, which depended on capital abbeyes in England, and which had been bequeathed to them when that province was united to England. The most effectual method, however, of warding off the blow, was by persuading the king to undertake a war with France, to recover the provinces which had formerly belonged to England. This was agreeable to the dying injunction of Henry IV. who advised his son never to let the English rest long in peace, which was apt to breed intestine commotions; but to employ them in foreign expeditions, by which the prince might acquire honour, the nobility in sharing his dangers might attach themselves to his person, and all the idle spirits find occupation. The natural disposition of Henry sufficiently inclined him to follow this advice, and the civil disorders of France gave him the fairest prospect of success. Accordingly, in 1415, the king invaded France at the head of 30,000 men. The great progress he made was to be found related under the article FRANCE. He had espoused the king's daughter, and conquered the greatest part of the kingdom. His queen delivered of a son named Henry, whose birth was celebrated by the greatest rejoicings both at London and Paris; and the infant prince seemed to be universally regarded as heir to both monarchies. But Henry's glory, when it seemed to be approaching the summit, was blasted at once by death, and all his mighty projects vanished.

seized with a fistula, a distemper which at the time the physicians could not cure; and he died on the 31st Aug. 1422; in the 34th of his age, and 10th of his reign.

33.) ENGLAND, HISTORY OF, TO THE DEATH OF HENRY VI., AND CORONATION OF EDWARD IV. Henry VI. succeeded to the throne when he was quite a year old, and his reign affords only the most dismal accounts of misfortunes and civil wars. His relations very soon began to dispute about the administration during his minority. The Duke of Bedford, one of the most accomplished princes of the age, was appointed by parliament protector of England, defender of the church, and first counsellor to the king. His brother, the duke of Gloucester, was appointed to govern in his absence, while he fought the war in France; and to limit the power of both brothers, a council was named, without whose advice and approbation no measure could be carried into execution. The kingdom of France was now in the most desperate situation. The English were masters of almost the whole of it. Henry VI. though but an infant, was solemnly invested with regal power by legates at Paris; so that Charles VII. of France succeeded only to a nominal kingdom. With all the great advantages, however, the English laid claim to; and in the year 1450 were totally expelled from France. (See FRANCE.) It may easily be imagined, that such a train of bad success would produce discontents at home. The duke of Gloucester was envied by many on account of his high station. Among these was Henry Mortimer, Bp. of Winchester, great uncle to the king, and the legitimate son of John of Gaunt, father to Richard II. The prelate, to whom the king's education had been committed, was a man of great capacity and experience, but of an intriguing and dangerous disposition. He frequent disputes with the duke of Gloucester, whom he gained several advantages on account of his open temper. The duke of Bedford loved both his own authority and that of parliament to reconcile them, but in vain; their mutual animosities served for several years to embarrass government, and to give its enemies every advantage. The sentiments of the two leaders were mutually divided with regard to France. The king laid hold of every prospect of accommodation with that country; and the duke of Gloucester was for maintaining the honour of the English arms, and regaining whatever had been lost by treaties or delay. Both parties called in all auxiliaries they could. The bishop resolved to strengthen himself by procuring a proper match for Henry, at that time 13 years old; and then bringing over the queen to his interests. Accordingly, the earl of Suffolk, a nobleman whom he was to be steadfast in his attachments, was sent to France, apparently to settle the terms of a peace which had then been begun, but in reality to procure a suitable match for the king. The king and his friends had cast their eye on Margaret of Anjou, daughter of Regnier, titular king of Sicily, Naples, and Jerusalem; but without her real power or possessions. She was considered as the most accomplished princess of the

age, both in mind and person; and it was thought would, by her own abilities, be able to supply the defects of her husband, who appeared weak, timid, and superstitious. The treaty was therefore hastened on by Suffolk, and soon after ratified in England. The queen came immediately into the bishop's measures: Gloucester was deprived of all real power, and every method taken to render him odious. One step taken for this purpose was to accuse his duchess of witchcraft. She was charged with conversing with one Roger Bolingbroke, a priest and reputed necromancer; and also with one Mary Gourdmain, supposed to be a witch. It was asserted that these three in conjunction had made an image of the king in wax, which was placed before a gentle fire; and as the wax dissolved, the king's strength was expected to waste; and upon its total dissolution, his life was to be at an end. This accusation was readily believed in that superstitious age. The prisoners were pronounced guilty; the duchess was condemned to do penance and suffer perpetual imprisonment; Bolingbroke the priest was hanged, and the woman burnt in Smithfield. The bishop, called also the Cardinal, of Winchester, was resolved to carry his resentment against Gloucester to the utmost. He procured a parliament to be summoned, not at London, which was too well affected to the duke, but at St Edmundsbury, where his adherents were sufficiently numerous to overawe every opponent. As soon as Gloucester appeared, he was accused of treason and thrown into prison; and on the day on which he was to make his defence, he was found dead in his bed, though without any signs of violence upon his body. The death of the duke was universally ascribed to the cardinal, who himself died six weeks after, testifying the utmost remorse for the bloody scene he had acted. What share the queen had in this transaction, is uncertain, but most people believed that without her knowledge the duke's enemies durst not have ventured to take away his life. The king himself shared in the general ill will, and he never had the art to remove the suspicion. His incapacity also began every day to appear more clearly, and a pretender to the throne soon made his appearance. In 1455, Richard duke of York began to prefer his claims to the crown. All the males of the house of Mortimer were extinct; but Anne, the sister of the last earl of March, having espoused the earl of Cambridge, who had been beheaded for treason in the reign of Henry V. had transmitted her latent, but not yet forgotten claim, to her son Richard. This prince, descended by his mother from Philippa, only daughter of the duke of Clarence, 1st son of Edward III. stood plainly in order of succession before the king; who derived his descent from the duke of Lancaster, 3d son of that monarch. The duke was a man of valour and abilities, as well as of some ambition; and he thought the weakness and unpopularity of the present reign afforded a favourable opportunity to assert his title. The ensign of Richard was a white rose, that of Henry a red one; and this gave names to the two factions, who were now about to drench the kingdom in blood. After the cardinal of Winchester's death, the duke of Suffolk,

who

who also had been concerned in the assassination of Gloucester, governed every thing with uncontrollable sway. His conduct soon excited the jealousy of the other nobility, and every odious or unsuccessful measure was attributed to him. The duke, however, imagining that his crimes were of such a nature as could not be proyed, boldly called upon his enemies to show an instance of his guilt. The house of commons immediately opened against him a charge of corruption, tyranny, and treason. He was accused of being the cause of the loss of France; of persuading the French king, with an armed force, to invade England; and of betraying the secrets of state. The popular resentment against him was so strong, that Henry, to secure him as much as possible, sentenced him to five years banishment. This was considered by his enemies as an escape from justice. The captain of a ship was therefore employed to intercept him in his passage to France. He was seized near Dover, his head struck off on the side of a long boat, and his body thrown into the sea. The complaints against Henry's government were heightened by an insurrection headed by one John Cade, a native of Ireland. He had been obliged to fly over into France for his crimes: but, on his return, seeing the people prepared for violent measures, he assumed the name of *Mortimer*; and, at the head of 20,000 Kentish men, advanced towards Blackheath. The king sent a message to demand the cause of their rising in arms. Cade, in the name of the community answered, that their only aim was to punish evil ministers, and procure a redress of grievances for the people. On this a body of 15,000 troops were levied, and Henry marched with them in person against Cade, who retired on his approach, as if he had been afraid of coming to an engagement. He lay in ambush, however, in a wood; not doubting but he should be pursued by the king's whole army: but Henry was content with sending a detachment after the fugitives, and returning to London himself; upon which Cade issued from his ambush, and cut the detachment in pieces. Soon after, the citizens of London opened their gates to the victor; and Cade, for some time, maintained great order and regularity among his followers. He always led them out into the fields in the night-time, and published several edicts against plunder and violence of any kind. He was not, however, long able to keep his people in subjection. He beheaded the treasurer Lord Say, without any trial; and soon after, his troops committing some irregularities, the citizens resolved to shut their gates against him. Cade endeavouring to force his way, a battle ensued, which lasted all day, and was ended only by the approach of night. The Abp. of Canterbury, and the chancellor, who had taken refuge in the Tower, being informed of the situation of affairs, drew up, during the night, an act of amnesty, which was privately dispersed among the rebels. This had such an effect, that in the morning Cade found himself abandoned by his followers; and retreating to Rochester, was obliged to fly alone into the woods. A price being set on his head by proclamation, he was discovered and slain by one Alexander Eden; who, in recompence for his service,

was made governor of Dover Castle. The country now began to entertain suspicions, that the insurrection of John Cade had not happened merely in consequence of his own machinations and ambition, but that he had been instigated thereto by the duke of York. As he was about this time expected to return from Ireland, and a report in place that he was now to assert his right by force of arms, orders were issued in the king's name to deny him entrance into England. This was prevented by his appearing with no more than ordinary attendants; but though he thus escaped the danger for the present, he saw the necessity of instantly proceeding in support of his claim. His partizans were instructed to distinguish between his right by succession and by the laws of the kingdom. The adherents of Lancaster maintained, that though the advancement of Henry might be looked upon as irregular, yet it was founded upon general consent; or even allowed it to have been at first invalid, it had now become for a long time established, and acquired the force of consequence; nor could the right of succession at any rate be pleaded for the purpose of overthrowing the general peace and tranquillity of the kingdom. The principles of liberty as well as the maxims of true policy had been injured by the house of York; while the public were indebted to those of Lancaster, no less by political and moral duty, in consequence of the oaths of fealty that had been so often sworn to them; than by the duke of York himself having repeatedly sworn allegiance to them, and thus renounced those claims which he now brought forward to disturb the public tranquillity. On the part of the duke of York it was replied, that the good of the people required the maintenance of order in the succession of princes; that, by adhering constantly to rule, a number of inconveniences would be prevented which must otherwise ensue; and that that order had been broken through in the case of Henry IV. it was never too late to remedy a pernicious precedent. It would indeed be a great encouragement to usurpers, if the immediate possession of power, or their continuance in it for years, could convert them into legal princes; the people must be in a very miserable situation if all restraints on violence and ambition were taken off, and full liberty given to every man to make what attempts he pleased. They did indeed deny that time might confer solidity on government originally founded in usurpation; but a very long course of years was not only required for this purpose, but a total extinction of the family who had any just title. The deposition of Edward II. and advancement of Henry IV. were legal acts, but the effects of mere lenity to the people; in which the house of York had acquiesced from necessity, and not from any belief of justice of their cause; nor could this be ever interpreted into any renunciation of their pretensions; neither could the restoration of the order of succession be considered as an encouragement to rebellion, but as the correction of a former abuse by which rebellion had been encouraged. Besides, the original title of Henry IV. was founded entirely on present convenience; and even this was now entirely shifted to the house of York.

York. The present prince was evidently incapable of governing the kingdom by reason of his imbecility; so that every thing was governed either by corrupt ministers or an imperious queen, who engaged the nation in foreign connections entirely contrary to its interests; while on the other hand, the true heir of the crown was a prince of approved judgment and experience, and a native of England, who, by his restoration, would undoubtedly correct all those abuses of which there was now such just reason to complain. In this dispute it was evident that the house of York, the better in point of argument; nevertheless, a prince of the house of Lancaster was in immediate possession of the throne, and could by no means be charged with any crime, the cause of the former was less generally interesting; especially as it must always have been uncertain, *a priori*, whether the duke of York would have governed any better than king Henry. After his return from Ireland, however, the former used all power and influence to foment the discontents which had for some time prevailed in the kingdom; and the conduct of next parliament manifested the success of his intrigues. A violent attack was made upon such noblemen as were known to be most in favour with the king. The house of commons presented a petition against the duke of Somerset, the duchess of Suffolk, the Bp. of Chester, lord Dudley, and several others of inferior rank; praying not only that the king should remove them from his council, but that he should prohibit them from coming within twelve miles of the court. Henry not daring to refuse the petition altogether, consented to banish all of inferior rank, whom the commons had named, but only for a year; and this too on condition that he had no use for their assistance in any rebellion. But he rejected a bill attainting the late duke of Suffolk, and proposed some other measures which seemed to militate against the court, though it had passed both house of lords, and the house of commons. Encouraged by this disagreement between Henry and his parliament, the duke of York raised an army of 10,000 men, with whom he marched to London, demanding a reformation in government, and the removal of the duke of Somerset. This first enterprise, however, proved unsuccessful; the gates of the city were shut against him, and he was pursued by the king at the head of a superior army. On this he retired into Kent; and as there were many of his friends in the army of the king, a conference took place, in which Richard still insisted upon the removal of the duke of Somerset, and his submission to be tried in parliament. This request in appearance complied with, and Somerset fled: the duke of York was then persuaded to wait upon the king in his royal pavilion; but, repeating his charge against the duke, he was refused to see the latter come out from behind the curtain, and offer to maintain his innocence. Richard perceiving that he had not sufficient influence to ruin his adversary, pretended to be satisfied, and retired to his seat at Wigmore in Wales; during the time he resided there, a better opportunity was given him of accomplishing his design.

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signs than he could have hoped for. The king fell into a kind of lethargic disorder, which increased his natural imbecility to such a degree, that he could no longer retain a shadow of royalty. Richard now had interest enough to get himself appointed protector, with power to hold parliaments at pleasure; with which high office he was no sooner invested, than he turned out all the Lancastrian party from their offices, and sent the duke of Somerset to the Tower; but on the recovery of the king, which happened not long after, he himself was dismissed from his employment, the duke of Somerset released, and the administration once more put into his hands. On this the duke of York levied an army, merely, as he pretended, to enforce the reformation of government and the removal of the duke of Somerset. Thus Henry was obliged to face him in the field. A battle ensued at St Alban's; in which the royalists were defeated, and the duke of Somerset, the chief partizan of their cause, killed in the action. The king himself was wounded, and took shelter in a cottage near the field of battle; where he was taken prisoner, but was afterwards treated with great respect and kindness by the duke of York. Henry, though he was now only a prisoner treated with the forms of royalty, was nevertheless pleased with his situation; but his queen, a woman of a bold and masculine spirit, could not bear to have only the appearance of authority, while others enjoyed all the real power. She therefore excited the king once more to assert his right by force of arms; and after several manœuvres, the duke of York was obliged to retire from court. A negotiation for peace was at first set on foot, but the mutual distrust of both parties soon broke it off. The armies met at Bloreheath on the borders of Staffordshire, on the 23d Sept. 1459; and the Yorkists at first gained some advantages. But when a more general engagement was about to ensue, a body of veterans who served under the duke of York deserted to the king; and this so intimidated the duke's party, that they separated the next day without striking a blow. The duke of York fled to Ireland; and the earl of Warwick, one of his ablest and best supporters, escaped to Calais, with the government of which he had been entrusted during the late protectorship. The York party, though thus in appearance suppressed, only waited a favourable opportunity of retrieving their affairs. Nor was this long wanting. Warwick having met with some success at sea, landed in Kent; and being there joined by other barons, marched up to London amidst the acclamations of the people, and soon found himself in a condition to face the royal army. An engagement ensued at Northampton on the 10th July 1460; in which the royalists were entirely defeated, and the king again taken prisoner. The duke of York then openly laid claim to the crown; and on this occasion the first instance of a spirit of national liberty is said to have appeared in the House of Lords. The cause of Henry and the duke of York was solemnly debated; and the latter though a conqueror did not absolutely gain his cause. It was determined that Henry should possess the throne during his life; and that the duke of York

should be appointed his successor, to the exclusion of the prince of Wales, who was then a child. Though the royal party now seemed destitute of every resource, the queen still retained her intrepidity. She fled into Wales, where she endeavoured to raise another army. The northern barons, provoked at the southern ones for settling the government and succession to the crown without their consent, soon furnished her with an army of 20,000 men. Another battle was fought near Wakefield Green, on the 24th Dec. 1460: The Yorkists were defeated, and the duke himself was killed in the action. His head was afterwards cut off by the queen's orders, and fixed on one of the gates of York, with a paper crown, in derision of his title. His son the earl of Rutland, a youth of 17, was taken prisoner, and killed in cold blood by Lord Clifford, in revenge for his father's death, who had fallen in the battle of St Alban's. After this victory, Margaret marched towards London, to set the king at liberty; but the earl of Warwick, who now put himself at the head of the Yorkists, led about the captive king, in order to give a sanction to his proceedings. He engaged the queen's forces at St Alban's; but through the treachery of Lord Lovelace, who deserted during the heat of the engagement with a considerable body of forces, Warwick was defeated, and the king fell once more into the hands of his own party. The submission of the city of London seemed now to be the only thing wanting to complete the queen's success; but Warwick had secured it in his interests, and the citizens refused to open their gates to the queen. In the mean time, young Edward, eldest son of the late duke of York, put himself at the head of his father's party. He was now in the bloom of youth, remarkable for the beauty of his person and his bravery, and was a great favourite of the people. He defeated Jasper Tudor earl of Pembroke, at Mortimer's cross in Herefordshire. The earl himself was taken prisoner, and immediately beheaded by Edward's orders. After this, he advanced to London; and being joined by the remainder of Warwick's army, he soon obliged Margaret to retire, entered the city amidst the acclamations of the people, and was crowned king on the 5th of March 1461.

(34.) ENGLAND, HISTORY OF, TO THE DEATH OF EDWARD IV. Queen Margaret, notwithstanding all her misfortunes, still continued undaunted. She retired to the north, where she was soon joined by such numbers, that her army amounted to 60,000 men. She was opposed by young Edward and Warwick at the head of 40,000; and both armies met near Townton in Yorkshire, on the 29th March, 1461. A bloody battle ensued, in which the queen's army was totally defeated; and as Edward, prompted by his natural cruelty, had ordered no quarter to be given, 40,000 of the Lancastrians were slain in the field or in the pursuit. Edward is said to have gained this victory by means of a violent storm of snow, which blew full in the face of the queen's army, and so blinded them that they could scarce make any use of their arms. After this disaster the queen fled to Scotland with her husband and son; and notwithstanding all her misfortunes, resolved once more

to enter England at the head of 5000 men granted her by the king of France. But even here she was attended by her usual bad fortune. Her little fleet was dispersed by a tempest, and she herself escaped with the utmost difficulty by entering the mouth of the Tweed. Soon after, a defeat which her few forces sustained at Hexham, seemed to render her cause entirely desperate; and the cruelties practised upon all her adherents rendered it very dangerous to befriend her. By these repeated misfortunes the house of Lancaster was so effectually ruined, that Margaret was obliged to separate from her husband, and both of them to shift for themselves the best way they could. The king was still protected by some of his friends who conveyed him to Lancashire, where he remained in safety for a twelvemonth; but being last discovered, he was thrown into the Tower and kept close prisoner. The queen fled with her son to a forest, where she was set upon by robbers who stripped her of her rings and jewels, treating her otherwise with the utmost indignity. A quarrel which happened among them about the division of the spoil afforded her an opportunity of escaping from their hands into another part of the forest, where she wandered for some time without knowing what to do. At last, when quite worn with hunger and fatigue, she saw a robber come up to her with a drawn sword in his hand. Finding it altogether impossible to escape, she suddenly took the resolution of putting herself under protection. Advancing towards him, then, and presenting the young prince, "Here, (said she,) my friend, I commit to your care the life of your king's son." This address so much surprised the robber, that, instead of offering her injury, he professed himself entirely devoted to her service. After living for some time concealed in the forest, she was at last conducted to the hide, where she found a ship which conveyed her to Flanders. On her arrival there, she went to her father's house, and in this retreat she spent some years in expectation of finding an opportunity of retrieving her affairs. Edward, in the mean time, thinking himself securely fixed on the throne, gave a loose to his favourite passions, of which was an immoderate love of women; so that he diverted him from this, the earl of Warwick, whom he was indebted for his crown, advised him to marry. Edward consented, and sent him to the continent to negotiate a match with the princess of Savoy. The negotiation proved successful; but, in the mean time, the king had privately espoused Elizabeth Woodville, daughter of Sir Philip Woodville, who had married the earl of Bedford after the death of her first husband. Edward had employed his arts of seduction on this lady in vain before he married her; but fortunately the match was concluded just at a time that the E. of Warwick had proved successful in his negotiation with the princess of Savoy. The minister therefore returned full of indignation against his sovereign; and Edward, foreseeing how great cause he had to be offended, determined to remove him entirely from his court. Warwick was likewise disgusted by the preference shown to the queen's party; which, though certainly a piece of very commendable policy,

ward, was entirely disagreeable to the ambitious disposition of that nobleman. A plan of revenge was therefore thought of; and a most powerful combination was formed against Edward: to accomplish which, Warwick not only employed his own influence, which was very extensive, but likewise that of the D. of Clarence, Edward's brother, to whom the earl had allied himself by marrying him his daughter in marriage; after which he persuaded him to embrace his cause. Some circumstances which took place about this time favoured the scheme. The inhabitants about Leonard's in Yorkshire complained, that the taxes levied for that institution, and which had been originally appointed for pious purposes, were exacted by the managers, who refused to contrivance their part. As the clergy were concerned in the affair, they attempted to silence their antagonists by ecclesiastical fulminations; upon which the latter took up arms, fell upon the officers of the hospital, and having massacred them, proceeded towards York, to the number of 15,000. In the first skirmish, they had the misfortune to lose their leader, who was instantly executed. The rebels, however, still continued in arms, and in a short time appeared in such numbers as to become formidable to government. Henry earl of Pembroke was sent against them with a body of 6000 men; and having taken Sir Henry Nevil, one of the leaders of the insurgents, prisoner, instantly put him to death; but this was soon revenged by a similar execution on himself, on his being detected and taken prisoner. This defeat had been occasioned by a disagreement betwixt the earls of Pembroke and Devonshire; in consequence of which the latter had gone off with his troops, leaving Pembroke to shift for himself the best way he could. The king, enraged at this, caused Devonshire to be executed in a like summary manner; but this was of no service to his cause; a new body of insurgents appeared under Sir Robert Ufford, son to a nobleman of that name. The king, to secure himself from all suspicions of disaffection, fled to a monastery; but he was soon ended from thence and put to death by the infidels' promises of king Edward, whose treachery was equal to his cruelty. His son soon after shared the same fate, being defeated and taken prisoner. Edward, who instantly ordered him to be beheaded, along with Sir Thomas Landre and other sons of distinction. Notwithstanding such an example of a general insurrection, the king had still suspicion of the loyalty of Warwick and Clarence, that he employed them in raising troops against the insurgents. Instead of executing their commission with fidelity, however, they joined the discontented with all the forces they could raise; quite disconcerted by the defeat and death of Robert Welles, they retired to Lancashire, in hopes of being joined by Lord Stanley, who had married the E. of Warwick's sister. Being disappointed in this, they were obliged to disband their army, and fly into Devonshire, whence they set out for Calais. Upon their arrival on the continent, matters seemed not to be much mended: the deputy governor, whom Warwick had left, refused him admittance; nor would he even allow the duchess of Clarence to land, though she had

been delivered of a son on board only a very few days before, and was at that time extremely ill. Being acquainted, however, with the uncertainty of the affairs of England at that time, he afterwards made an apology to Warwick for this behaviour. The latter pretended to be easily reconciled; but immediately left the place, having seized some Flemish vessels which he found lying in the neighbourhood. As a very close alliance subsisted between Warwick and the D. of Burgundy, the king of France became uneasy; and therefore, as soon as the earl landed on his dominions, received him with the greatest marks of esteem. The reconciliation betwixt him and the unfortunate Q. Margaret now seemed to be natural, though, considering all circumstances, this must have formerly appeared impossible. The earl's father had been put to death by the orders of Margaret; and Warwick had twice taken prisoner K. Henry, banished the queen, and put to death almost all their faithful adherents. By the mediation of the French monarch, however, all differences were accommodated. A fleet was prepared to reconduct them to England; and they landed at Dartmouth with a small body of troops, while Edward was in the north suppressing an insurrection. Warwick was attended with astonishing success on his arrival in England, and in less than six days saw himself at the head of 60,000 men. Edward was now obliged in his turn to fly the kingdom. Having narrowly escaped an attempt made upon his person by the marquis of Montague, he embarked on board a small fleet which lay off Lynn in Norfolk. While at sea, he was chased by some ships belonging to the Hans Towns that were then at war both with France and England; but at length, having escaped all dangers, Edward landed safely in Holland, where he met with but an indifferent reception from the D. of Burgundy, with whom he had lately entered into an alliance. Warwick in the mean time advanced to London, and once more re-ascended and placed on the throne the miserable king Henry VI. A parliament was called, which very solemnly confirmed Henry's title to the throne, and Warwick himself was dignified by the people with the title of the *king-maker*. All the attainers of the Lancastrians were reversed; and every one was restored who had lost either honours or fortune by his former adherence to Henry's cause. All the adherents of Edward fled to the continent, or took shelter in monasteries. But Edward's party was not yet destroyed. After an absence of 4 months, being seconded by a small body of troops granted him by the D. of Burgundy, he made a descent at Ravenspur in Yorkshire. At first he met with little success; but his army increasing on his march, he was soon in a condition to appear before the capital, which immediately opened its gates. The unfortunate Henry was thus again pulled from the throne; and the hopes of Warwick were almost totally blasted by the defection of Clarence, Edward's brother. Warwick knew his forces to be inferior to those of Edward, but placed great dependence on his own generalship. He therefore advanced to Barnet, within ten miles of London, where he resolved to wait the coming of Edward. The latter soon came up with him, and on the

24th of April, 1471, a most obstinate and bloody battle was fought. Edward, as usual, had offered no quarter to be given; and obtained the victory through a mistake of a body of Warwick's forces, who fell with fury on their own party instead of the enemy. The earl himself was slain, together with his brother, and 10,000 of his bravest followers. The queen was just then returned with her son from France, where she had been soliciting supplies. She had scarce time to refresh herself from the fatigues of the voyage, when she received the fatal news of the death of Warwick, and the total destruction of her party. All her resolution was not able to support her under such a terrible disaster. Her grief now for the first time, it is said, manifested itself by her tears; and she immediately took sanctuary in the abbey of Beaulieu in Hampshire. Here she still found some friends willing to assist her. Tudor earl of Pembroke, Courtney earl of Devonshire, the lords Wenlock and St John, with some other men of rank, encouraged her yet to hope for success, and promised to stand by her to the last. On this assurance, she resumed her courage; and advancing through the counties of Devon, Somerset, and Gloucester, increased her army every day. At last, however, she was overtaken by Edward with his victorious army at Tewksbury, on the banks of the Severn. The queen's army was totally defeated; the earl of Devonshire and lord Wenlock were killed in the field; the duke of Somerset, and about 20 other persons of distinction, who had taken shelter in a church, were surrounded, dragged out, and beheaded; about 3000 of their party fell in battle, and the army was entirely dispersed. Q. Margaret and her son were taken prisoners, and brought to the king, who asked the prince in an insulting manner, how he dared to invade his dominions? The young prince replied, that he came thither to claim his just inheritance; upon which Edward struck him on the face with his gauntlet. The Dukes of Clarence and Gloucester, Lord Hastings, and Sir Thomas Gray, taking this blow as a signal for farther violence, hurried the prince into the next apartment, and there dispatched him with their daggers. Margaret was thrown into the Tower along with her husband Henry, who expired in that confinement a few days after. It was universally believed that he was murdered by the D. of Gloucester, though of this there was no direct evidence. Margaret was ransomed by the king of France for 50,000 crowns, and died a few years after in a most miserable situation. Edward being now freed from all his enemies, began to punish those who had formerly appeared against him. Among the cruelties he committed, that on his brother the duke of Clarence was the most remarkable. The king happening to be one day hunting in the park of Thomas Burdet, a servant of the duke killed a white buck which was a great favourite of the owner. Burdet, vexed at the loss, broke out into a passion, and wished the horns of the deer in the belly of the person who advised the king to that insult. For this exclamation Burdet was tried for his life, and executed at Tyburn. The duke of Clarence exclaimed against the iniquity of this sentence; upon which he was arraigned before

the house of peers, found guilty, and condemned to death. The only favour granted him was to have the choice of his death; and his choice was a very singular one, namely, to be drowned in a butt of Malmsey wine; which was accordingly done. The rest of this reign affords little else than an history of the king's amours. Among his many mistresses, Jane Shore was the most remarkable. See SHORE. The king died on the 9th of April, 1482, in the 42d year of his age, and the 11th of his reign, counting from his first assuming the crown. Besides five daughters, he left two sons, Edward prince of Wales, his successor, then in his 13th year; and Richard duke of York in his 9th.

(35.) ENGLAND. HISTORY OF, TO THE MURDER OF EDWARD V, AND HIS BROTHER. On the death of Edward IV. the kingdom was divided into new factions. The queen's family, which during the last reign had come into power, was become obnoxious to the old nobility, who considered them as their inferiors. The king had endeavoured to prevent these animosities from coming to a height, by desiring on his death-bed that his brother Richard duke of Gloucester should be entrusted with the regency; and recommended peace and unanimity during the minority of his son. But the king was no sooner dead than the former resentment between these parties broke out with violence; and the duke of Gloucester, who was endued with almost every bad quality, resolved to profit by their contentions. His first step was to get himself declared protector of the realm; and having arrested the earl of Rivers, the king's uncle and guardian, he met young Edward in his way from Ludlow castle, where the king had resided during the latter part of his reign, and respectfully offered to conduct him to London. Having thus secured the person of the king, he next got possession of his brother's person also. The queen had retired with this design into Westminster abbey; and it was not without extreme regret that she delivered him up, at the intercession of the primate and Abp. of York. A few days after Gloucester had made himself master of the persons of the two princes, he had them confined in the Tower, under pretence of guarding them from danger; and soon after spread reports of their illegitimacy, and by pretended obstacles put off the young king's coronation. Lord Stanley first began to suspect his designs; and communicated his suspicions to lord Hastings, who long been firmly attached to the king's family. Hastings would not at first give credit to this rumour, but he soon had a fatal proof of the truth of it. On the 13th June 1483, he was hurried out of the council-room in the Tower by Gloucester's order, and beheaded on a log of timber. The soldier who carried him off made a buttle, as if an attempt had been made to rescue him, and one of them made a blow at Lord Stanley's head with a pole ax; but he escaped by shrinking under the table. The same day were executed the earl of Rivers, and some others, who had committed the other crime than being faithful to the young king. The protector now thought he might with safety lay claim to the throne. He had previously gained over the duke of Buckingham, a nobleman of great influence. He used his utmost endeavours

inspire the people with a notion of the illegitimate birth of the late king. Dr Shaw, a popular teacher, was also hired to harangue the people the same purpose from St Paul's cross. Having expatiated on the incontinence of the queen, and the illegality of the young king's title, he then read a panegyric on the virtues of the protector. It is the protector (continued he) who carries in his face the image of virtue, and the marks of a noble descent. He alone can restore the lost glory and honour of the nation." It was hoped that on this occasion some of the populace would be cried out, "Long live King Richard!" but the audience remaining silent, the duke of Buckingham undertook in his turn to persuade them. Having expatiated on the calamities of the last reign, and the illegitimacy of the present race, he said to the people, that he saw only one method of ridding off the miseries which threatened the realm, which was by electing the protector; but he seemed apprehensive, that he would never be raised upon to accept a crown accompanied by such difficulty and danger. He next asked the auditors, whether they would have the prince for their king? but was mortified to find a total silence ensued. The mayor, who was to be secret, willing to relieve him in this embarrassed situation, observed, that the citizens were accustomed to be harangued by a man of his way, and would only give an answer to their ruler. This officer, therefore, repeated the duke's speech; but the people continuing still silent, "This is strange obstinacy (cried the duke;) only require of you, in plain terms, to declare, whether or not you will have the duke of Gloucester for your king; as the lords and commons are sufficient power without your concurrence?" At this, some of the meanest apprentices, incited by the servants of the protector and Buckingham, raised a feeble cry of "God save King Richard!" The mob at the door repeated the cry; and throwing their caps into the air, cried out, "A Richard! A Richard!" After this farce was acted, Buckingham, on the 24th of June, 1483, waited Richard with offers of the crown; but the prince, with hypocritical modesty, at first declined the offer; till being told, that the people, in case of his refusal, must look out for one that would more compliantly accept the government of England and France, with a resolution, as he was to defend the one and subdue the other. The step taken by the new king was to send orders to Sir Robert Brackenbury governor of the Tower, to put the young princes to death. But he refused; and submissively answered, that he knew not how to embroil his hands in innocent blood. A fit instrument for this purpose, however, was not long wanting. Sir James Tyrrel had undertaken the office; and Brackenbury ordered to resign the keys to him for one night. Tyrrel choosing three associates, Slater, Ghyton, and Forest, came in the night-time to the door of the chamber where the princes were lodged; and sending in the assassins, bid them execute their commission, while he himself staid without. They found the young princes in bed, and fallen into a sound sleep. The assassins smothered them with the bolster and pillows; after

which they showed their naked bodies to Tyrrel, who ordered them to be buried at the stair foot under an heap of stones. These circumstances are said to have been confessed in the succeeding reign, though the perpetrators escaped punishment. The bodies of the two princes were sought for without any success, in the reign of Henry VII. but in the time of Charles I. the bones of two persons answering to their age were found in the spot where they were said to have been buried; which, being supposed to be the remains of these two unfortunate youths, they were buried under a marble monument in Westminster abbey.

(36.) ENGLAND, HISTORY OF, TO THE OVERTHROW AND DESERVED DEATH OF RICHARD III. Richard having thus secured himself on the throne by the most iniquitous methods, attempted to strengthen his interest by foreign alliances, and procuring the favour of the clergy at home by great indulgences; but he found his power threatened from a quarter where he least expected an attack. The duke of Buckingham, who had been so instrumental in raising him to the throne, did not think himself properly rewarded. He made a demand of some confiscated lands in Hereford, to which his family had an ancient claim. Richard either reluctantly complied with his request, or only granted it in part; so that a coolness soon ensued between them, and in a short time Buckingham came to a resolution of dethroning the monarch whom he had just raised. For some time he remained in doubt, whether he should assume the crown himself or set up another. At length he determined on the latter; and resolved to declare for Henry earl of Richmond, who was at that time an exile in Brittany, and was considered as the only surviving branch of the house of Lancaster. He had the good fortune to escape the numerous massacres of the former reigns; but being a descendant of John of Gaunt by the female line, he was still obnoxious to those in power. He had long lived in exile, and was once delivered over to the ambassadors of Edward IV. who were preparing to carry him to England, when the duke of Brittany, who delivered him, repented, and took him from the ambassadors just as they were carrying him on ship-board. His right to the crown by succession was very doubtful; but the cruelty of Richard inclined the people to favour him; and, to give an additional strength to his title, a match was projected between him and the princess Elizabeth, the eldest daughter of Edward IV. which, by uniting the two rival families, would put an end to those dissensions which had so long filled the kingdom with bloodshed and confusion. Richard, in the mean time, began to entertain doubts of the fidelity of Buckingham, and determined to cut him off. For this purpose he sent for him to court; but Buckingham, instead of obeying the summons, fled into Wales, where he raised a considerable army, and forthwith set out to the eastward with a design to invade England. Richard hastened to meet him with what forces he could raise; but the march of Buckingham being retarded by a most uncommon inundation of the Severn which lasted 10 days, his troops were so disheartened at this event, that they almost all deserted him. The duke

Duke was therefore obliged to fly in distress, and Richard instantly set a price upon his head. Buckingham was now obliged to trust his life in the hands of an old servant of his own, named *Banisher*; but this man, tempted by the greatness of the reward, betrayed him to the sheriff of Shropshire, by whom he was seized and conducted to Richard at Salisbury, who caused him to be instantly executed. The earl of Richmond, in the mean time, had set sail from St Maloes, with a body of 5000 men: but after his arrival in England, receiving the disagreeable news of Buckingham's misfortune, he set sail again for Bretagne; while Richard, emboldened by the bad success of his enemies, determined to confirm his title to the throne by calling a parliament, which till this time he had not ventured to do. At present, matters were so circumstanced, that the parliament had no other resource than to comply with his desires, and acknowledge his right to the crown. An act was passed confirming the illegitimacy of Edward's children; and an attainder was also confirmed against the earl of Richmond; the duties of tannage and poundage were granted to the king for life; and his only son Edward, then about 12 years of age, was created prince of Wales. In return for these concessions, Richard passed several popular laws, particularly against the extorting of money by benevolences, and some others calculated to gain the good will of the opposite party. He paid his court also to the queen-dowager with such assiduity and success, that she left her sanctuary, and put herself and her daughters into his hands. The ambition and cruelty of this man indeed are said to have extinguished every sentiment of natural affection as well as humanity. He had married Anne, the second daughter of the earl of Warwick, and widow of Edward prince of Wales, whom he himself had murdered; but having born him but one son who died about this time, he considered her as an invincible obstacle to the accomplishment of his desires; for which reason it was thought he put an end to her life by poison: and as he knew that the projected match, between the earl of Richmond and the princess Elizabeth, could only make the rivalry of the former any way formidable, he resolved to obtain a dispensation from the pope for marrying her himself. The queen dowager is even said to have come into this scheme with a view to recover her power; but the princess herself always rejected his addresses with abhorrence. The refusal of the princess occasioned no small perplexity in Richard; and before he could determine on any proper method of accomplishing his purpose, he received news of Richmond's preparations for landing in England. These being soon accomplished, Henry set sail from Harfleur in Normandy, and landed without opposition, on the 17th of August 1485, at Milford haven in Wales. Richard in the mean time, not knowing where the invasion was to take place, had posted himself at Nottingham; which being almost in the centre of the kingdom, was therefore proper for resisting any invader. Sir Rice ap Thomas and Sir Walter Herbert were commissioned by Richard to oppose his rival in Wales; but the former immediately deserted to him, and the latter made but a very feeble resistance. Richard

instantly resolved to meet his antagonist, and risk every thing on the event of a battle. Richmond, though he had not above 6000 men, and the king near double that number, did not decline the combat; being chiefly encouraged by the promises of Lord Stanley to join him with a body of 7000 men, with whom he hovered at a little distance from the intended field of battle, seeming undetermined to join either side. The king, on receiving command of his army to form themselves in order of battle, intrusted the van to the duke of Norfolk, while he himself, with the crown on his head, took the command of the main body. Lord Stanley in the mean time posted himself on a flank between the two armies, while his brother Sir William took his station directly opposite to his intention of either joining the enemy or keeping neutral during the time of the engagement. Now far from being doubtful, Richard sent orders to join the main body; which not being complied with, the tyrant determined to put to death Stanley's son, who had been left with him as a pledge of his father's fidelity. He was persuaded, however, to defer the execution till the engagement, that Stanley might thereby be induced to delay his purpose in joining the enemy. This, however, did not answer the expectation. Soon after the engagement was begun, Stanley deserted Richard's party, and joining Richmond entirely decided the fortune of the battle. The tyrant perceiving his situation to be desperate, and seeing his rival at no great distance from him, drove up against him with desperate hopes that either Henry's death or his own would decide the victory between them. He killed William Brandon the earl's standard bearer, dismounted Sir John Cheyney; and was on the reach of Richmond, when Sir William Stanley breaking in with his troops, Richard was surrounded and overwhelmed by numbers. His body found in the field, covered with dead enemies and besmeared with blood. It was thrown carelessly across a horse, carried to Leicester and the shouts of insulting spectators, and interred in the Gray-Friar's church of that place. The surper's crown being found on the field of battle was placed on the head of the conqueror, and the whole army cried out, "Long live King Henry!"

(37.) ENGLAND, HISTORY OF, UNDER HENRY VII. Two days after the battle, Henry orders to confine Edward Plantagenet earl of Warwick, and son of the unfortunate duke of Clarence; and to release the Princess Elizabeth who had been confined in the Tower. He advanced by slow and gradual marches to the city of London, where he was received with the greatest demonstrations of joy. He was crowned king of England on the 30th Oct. 1485; and, to bestow the splendor on that occasion, he bestowed the rank of knights banneret on 12 persons, and conferred peerages on three. Jasper earl of Penbrooke, his uncle, he created duke of Bedford; Thomas Lord Stanley his father-in-law, earl of Derby; and Edward Courtenay, earl of Devonshire. At the coronation likewise appeared a new institution, which the king had established for personal security as well as pomp; a band of 5000 men, who were denominated *Yeomen of the Guard*.

ard. But lest the people should take umbrage his step, as if it implied a diffidence of his sub-
 is, he declared the institution to be perpetual.
 ceremony of the coronation was performed
 Cardinal Bourchier, Abp. of Canterbury.—On
 18th Jan. 1486, he was married to the Prin-
 Elizabeth; and his marriage was celebrated
 London with greater appearance of joy than
 his first entry or his coronation had been.
 my remarked, with much displeasure, this ge-
 al favour born to the house of York; and the
 picions arising from it, not only disturbed his
 quillity during the whole of his reign, but
 d disgust towards his consort herself, and poi-
 ed all his domestic enjoyments. The reign of
 my VII. was for several years disturbed by plots
 insurrections. The people, by a long course
 civil war, had become so turbulent and facti-
 us, that no governor could rule, nor could any
 g please them. The violent animosity expres-
 by this monarch, however, against the house
 York, may justly be considered as one of the
 les of the extreme proneness to rebellion mar-
 ed by his subjects. Instead of endeavouring
 conciliate the affections of the opposite party,
 always strove to quell them by absolute force
 violence. For this purpose he took a jour-
 , soon after his accession, to the north of Eng-
 d; where the Yorkists were very numerous;
 ping to get the better of them by his presence.
 his journey thither, he received intelligence of
 insurrection against him by Vis. Lovel, with Sir
 my Stafford, and Thomas his brother, who
 raised an army, and were marching to besiege
 city of Worcester, while Lovel approached to
 them with a body of 3, or 4,000 men. They
 re dispersed, however, by the offer of a general
 don; which induced Lovel to withdraw from his
 ops, who were thereupon obliged to submit to
 king's mercy. The Staffords took sanctuary
 the church of Colnham near Abingdon; but as
 was found that this church had not the privi-
 e of protecting rebels, they were taken from
 ace: the elder was executed at Tyburn; but
 younger, pleading that he had been misled by
 brother, received a pardon. This success was
 e after followed by the birth of a prince; whom
 my named after the celebrated king ARTHUR,
 s is said to have been the direct ancestor of the
 uk of Tudor. All this success, however, as
 il as the general satisfaction which the birth of
 nince descended from the houses both of York
 d Lancaster necessarily occasioned, were not
 ficient to reconcile the hearts of the English to
 ir sovereign. His extreme severity still conti-
 ued towards the house of York, which was much
 e popular than that of Lancaster. Many of the
 eats had been treated with great cruelty, and
 eved of their fortunes under pretence of trea-
 e general assumption had likewise been made
 the grants made by the princes of the house of
 uk. It was likewise universally believed that
 e queen herself met with harsh treatment, on
 ount of her being one of that unfortunate
 zed; and, from all these circumstances, it was
 e unreasonably imagined that his enmity was in-
 eate and invincible. Hence, notwithstanding
 e politic and vigorous administration, people

made no scruple of openly expressing their disa-
 probation of his conduct and government; and
 one rebellion seemed to be extinguished only to
 give birth to another. The king had, at the com-
 mencement of his reign, confined the duke of Cla-
 rence's son, as has already been mentioned. This
 unfortunate youth, who had obtained the title of
 the earl of Warwick, was, through long confine-
 ment, entirely unacquainted with the affairs of
 the world. Simple as he was, however, he was
 now made use of to disturb the public tranquilli-
 ty. The queen-dowager was with great reason
 suspected to be at the bottom of this conspiracy;
 but not choosing to interfere openly in the matter
 herself, she employed one Simon a priest of Ox-
 ford to execute her purposes. This man cast his
 eyes upon one Lambert Simnel, a baker's son in
 the same place, a youth of 15 years of age, who,
 from his graceful appearance and accomplishments,
 seemed proper for personating a man of quality.
 A report had been spread, that Richard duke of
 York, second son of Edward IV. had secretly
 made his escape from the cruelty of his uncle, and
 lay somewhere concealed in England. Simon had
 at first instructed his pupil to assume that name,
 which he found to be much the object of public
 affection; but hearing afterwards a new report,
 that Warwick had escaped from the Tower, and
 observing that this news was attended with no less
 general satisfaction, he changed the plan of his
 imposture, and made Simnel personate that un-
 fortunate prince. The pliant youth was there-
 fore directed by his instructor to talk upon many
 occurrences, as happening to him in the court of
 Edward. But as the imposture was not calcula-
 ted to bear a close examination, he was removed
 to Ireland; and so well had he profited by the
 lessons given him, that he no sooner presented him-
 self to the earl of Kildare the deputy, claiming
 his protection as the unfortunate earl of Warwick,
 than he began to consult with several other noble-
 men with regard to him. These expressed even
 a stronger belief in Simnel's story than the depu-
 ty himself had done; and in proportion as the
 story was spread abroad, the more credit it ob-
 tained. The impostor was lodged in the castle of
 Dublin; the inhabitants universally took an oath
 of allegiance to him, as the true descendant of the
 Plantagenets; he was crowned with a diadem ta-
 ken from the statue of the blessed virgin, and pro-
 claimed king by the title of Edward VI. and the
 whole kingdom followed the example of the ca-
 pital. Such an unexpected event alarmed Henry
 so much, that he would have gone over to Ireland
 on purpose to quell the rebellion in person, had
 he not been afraid of the machinations of the
 queen dowager in his absence. To prevent any
 thing of this kind, it was resolved to confine her
 for life in a monastery; under pretence, however,
 that it was done on account of her having former-
 ly delivered up the princess her daughter to K.
 Richard. The queen murmured against the seve-
 rity of her treatment; but the king persisted in his
 resolution, and she remained in confinement till
 the time of her death, which happened some years
 after. The next measure was to show Warwick
 to the people. He was taken from the Tower,
 and led through the principal streets of London;
 after

after which he was conducted in solemn procession to St Paul's, where great numbers were assembled to see him. Still, however, they proceeded in Dublin to honour their pretended monarch; and he was crowned with great solemnity in the presence of the earl of Kildare, the chancellor, and the other officers of state. At last, being furnished by the dukes of Burgundy with a body of 2000 veteran Germans under the command of Martin Swart, a brave and experienced officer, he resolved to invade England. He landed in Lancashire, from whence he marched to York, expecting that the country people would rise and join him on his march. But in this he was deceived: the people were unwilling to join a body of foreigners; and were besides kept in awe by the great reputation of Henry. Lord Lincoln, therefore, who commanded the rebel army, determined to bring the matter to a speedy issue. Accordingly he met the royal army at Stoke in the county of Nottingham. An obstinate engagement ensued, but at length Sir Henry obtained a complete victory. Lord Lincoln, with 4000 private men, perished in the battle; and Simnel with his tutor Simon were taken prisoners. Simon being a priest, could not be tried by the civil power, and was only committed to close confinement. Simnel was pardoned, and made a scullion in the king's kitchen, whence he was afterwards advanced to the rank of falconer, in which employment he died. Henry being now freed from all danger from that quarter, determined to take ample vengeance on his enemies. For this purpose he took a journey into the north; but though he found many delinquents, his natural avarice prompted him to exact heavy fines from them rather than to put them to death. His proceedings, however, were extremely arbitrary; the criminals being tried, not by the ordinary judges, but either by commissioners appointed for the occasion, or suffering punishment by sentence of a court-martial. Having thus fully established his authority as far as it could be done by suppressing and punishing domestic enemies, he next determined to recommend himself to his subjects by a report of his military disposition; hoping, that by undertaking, or pretending to undertake, some martial enterprises, he would thus gain the favour of a people naturally turbulent, and unaccustomed to live long at peace with their neighbours. He certainly had not, however, the least intention of prosecuting foreign conquests; though, to please the people, he frequently gave out that he designed to invade France, and lay waste the whole country, rather than not recover his continental possessions. Under these pretences, particularly that of assisting the Bretons whom the king of France had lately subdued, and who had applied to him for relief, he persuaded his parliament to grant him a considerable supply; but this involved him in some difficulties. The counties of Durham and York, who had always been discontented with Henry's government, and still farther provoked by the oppressions under which they had laboured after the extinction of Simnel's rebellion, opposed the commissioners sent by the king to levy the tax. The latter applied to the earl of Northumberland, for his assistance in the execution of their office; but

instead of being able to enforce the levying of the tax, he himself was attacked and put to death by the insurgents. This act of violence committed by themselves, seemed to render the insurgents desperate, so that without more ado they prepared to resist the royal power, under the conduct of Sir John Egremont; but in this ill conducted and precipitate scheme they met with no success. Henry instantly levied a considerable force, which he committed to the charge of the earl of Surrey, by whom the rebels were quickly defeated. One of their leaders taken prisoner. Sir John Egremont fled to the dukes of Burgundy, who protected him. Thus Henry obtained the field under pretence of invading France, though he would willingly have avoided any expense in preparations for that purpose, in order to keep money in his possession; but as the Bretons applied to him for assistance, and their distress became every day more urgent, he found himself obliged to attempt something. With this view he set sail for Calais with an army of 25,000 foot and 1600 horse, of which he gave the command to the duke of Bedford and the earl of Oxford; but notwithstanding this apparent hostile disposition, negotiations for peace had been secretly begun, and commissioners even appointed to consider of the terms 3 months before Henry set out for the continent. As the love of money was his ruling passion, and the possession of Bretagne a great object to France, an accommodation took place betwixt the contending parties. The king of France engaged to pay Henry L. 20,000 as a reimbursement for the expences of his expedition, and stipulated at the same time to pay him and his heirs an annual pension of 25,000 crowns more. Thus the authority of Henry seemed to be so firmly established, as to leave no real dread any rival; but the dukes of Burgundy, resenting the depression of her family, and exasperated by her repeated disappointments, resolved to make a final effort against Henry. For this purpose, she propagated a report that her nephew Richard Plantagenet, duke of York, had escaped from the Tower where his elder brother was confined, and that he still lay somewhere concealed. Finding this report eagerly received, she found a young man who assumed both his name and character. The person chosen to act this part was the son of one Osbeck, or Warbeck, a converted Jew, who had been in England during the reign of Edward IV. His name was *Peter*; it had been corrupted after the Flemish manner into *Peterkin*, or *Perkin*. It was by some believed that Edward, among his amorous adventures, had a secret correspondence with Warbeck's wife, which might account for the great similarity of features between Perkin and that monarch. The dukes of Burgundy found this youth entirely suited to her purposes. The lessons she gave him were easily learned and strongly retained. His graceful air, his courtly address, his easy manner and elegant conversation, were capable of impressing upon all but those who were privy to the imposture. The kingdom of Ireland was pitched upon for Perkin's first appearance, as it had been before for that of Simnel. He landed at Cork, and immediately assumed the name of *Richard Plantagenet*.

insurgent, was followed by great numbers of dulous people. He wrote letters to the earls Desmond and Kildare, inviting them to join his ty; he dispersed every where the strange intelligence of his escape from his uncle Richard's ely; and his story meeting with general credit, he soon became an object of the public favour. All those who were disgusted with the king, pared to join Perkin; but particularly those formerly were Henry's favourites, and had tributed to place him on the throne. These, asking their services had not been sufficiently rewarded, now became heads of the conspiracy. Their attempts, however, were all frustrated by the violence of the king, and most of the conspirators were publicly executed. Perkin found it in vain to attempt any thing in England, and fled to the court of James IV. of Scotland. Here was received with great cordiality; and James increased his confidence in him so far, that he gave in marriage lady Catherine Gordon, daughter to the earl of Huntly, and a near relation of his own. But when he attempted to set him on the throne of England, he found himself disappointed; and on the conclusion of peace between the two kingdoms, Perkin was obliged to leave Scotland. From thence he went to Flanders; and finding with but a cool reception there, he resolved to try the people of Cornwall, who had lately risen on account of a new tax. On his first entrance, Perkin was joined by about 3000 of the people, with whom he laid siege to Exeter; but, however, having marched against him with a considerable army, Perkin's heart failed, though his followers now amounted to 7000; he took shelter in a monastery. His wife fell into the conqueror's hands; who placed her in a comfortable situation near the queen's person, with a comfortable pension, which she enjoyed till her death. Perkin being persuaded to deliver himself into the king's hand, was compelled to sign a confession of his former life and conduct; but this so defective and contradictory, that very little regard was paid to it. His life was granted; though he was still detained in custody, and was appointed to watch his conduct. In these, however, he broke loose; and flying to the sanctuary of Shyne, put himself into the hands of the monks. He was once more prevailed upon to trust himself in the king's hands, and was committed to the Tower; but having here entered into a correspondence with the earl of Warwick in order to make their escape, both of them were condemned and executed. To Henry VII. great measure is owing the present civilized state of the English nation. He had all along two objects principally in view; the one to depress the nobility and clergy, and the other to exalt and civilize the people. In the feudal times every vassal was possessed of a certain number of knights, over whom he had, by various methods, acquired an almost absolute power; and, therefore, upon every slight disgust, he was able to induce them to join him in his revolt or disobedience. Henry considered, that the giving of his vassals a power to sell their estates, which were hereditary, must greatly weaken their influence. This liberty therefore he gave them; and

it proved highly pleasing to the commons, notwithstanding it was disagreeable to the nobles themselves. His next scheme was to prevent their giving liveries to many hundreds of their dependents, who were thus kept like the soldiers of a standing army to be ready at the command of their lord. By an act passed in this reign, none but menial servants were allowed to wear a livery; and this law was enforced under severe penalties. With the clergy, Henry was not so successful. The number of criminals of all kinds who found protection in monasteries and other places appointed for religious worship, seemed to indicate little less than an absolute toleration of all vice. Henry used all his interest with the pope to get these sanctuaries abolished, but to no purpose. All that he could procure was, that if thieves, murderers, or robbers, registered as sanctuary men, should fall out and commit fresh offences, and retreat again, in such cases they might be taken out of the sanctuary and delivered up to justice. In 1500, the king's eldest son Arthur was married to the Infanta Catharine of Spain, which marriage had been projected and negotiated 7 years. But the prince dying in a few months after marriage, the princess was obliged to marry his younger brother Henry, who was created prince of Wales in his room. Henry himself made all the opposition which a youth of 12 years of age is capable of; but as the king persisted in his resolution, the marriage was by the pope's dispensation shortly after solemnized.—In the latter part of this king's reign, his economy degenerated into avarice, and he oppressed the people in a very arbitrary manner. He had two ministers, Empson and Dudley, perfectly qualified to second his avaricious views. They were both lawyers, and usually committed to prison by indictment such persons as they intended to oppress; from whence they seldom got free but by paying heavy fines, which were called mitigations and compositions; but by degrees the very forms of law were omitted; and they determined in a summary way upon the properties of the subjects, and confiscated their effects to the royal treasury.—Henry VII. died of the gout in his stomach, A.D. 1509, having lived 52 years, and reigned 23; and was succeeded by his son Henry VIII. In Henry VII's reign was built a large ship of war called the *Great Harry*, which cost £. 14,000. This was, properly speaking, the first ship in the English navy. Before this period, when the king wanted a fleet, his only expedient was to hire ships from the merchants.

(38.) ENGLAND, HISTORY OF, UNDER HENRY VIII. Henry ascended the throne when he was about 18 years of age, and had almost every advantage which a prince can have on his accession. He had a well-stored treasury, an indisputed title, and was at peace with all the powers in Europe. Commerce and arts had been some time introduced into England, where they met with a favourable reception. The young prince himself was beautiful in his person, expert in all polite exercises, open and liberal in his air, and loved by all his subjects. The old king, who was himself a scholar, had intrusted him in all the learning of the times, so that he was an adept in school divinity before the age of 18. All these advantages

get, however, seemed to have been lost upon the new king. Being destitute of a good heart and solid understanding, he proved a tyrant. Being always actuated, not by reason, but by the passion which was uppermost, he behaved in the most absurd and contradictory manner; and however fortunate some of his measures proved, it is impossible that either his motives, or the means he took to accomplish his purposes, can be approved of by any good man. One of his first acts in his royal capacity was to punish Empson and Dudley, who were obnoxious to the people, as instruments of the late king's rapacity. As they could not be impeached merely for executing the will of the king, they were accused of having entered into a treasonable conspiracy to seize by force the administration of government; and though nothing could be more improbable, the general prejudice against them was so great, that they were both condemned and executed. In 1510, Henry entered into a league with pope Julius II. and Ferdinand king of Spain, against Lewis XII. of France. In this alliance Henry was the only disinterested person. He expected nothing besides the glory which he hoped would attend his arms, and the title of *Most Christian King*, which the pope assured him would soon be taken from the king of France to be conferred on him. The pope was desirous of wresting from Lewis some valuable provinces which he possessed in Italy, and Ferdinand was desirous of sharing in the spoil. Henry summoned his parliament, who very readily granted him supplies, as he gave out that his design was to conquer the kingdom of France, and annex it to the crown of England. It was in vain that one of his old prudent counsellors objected, that conquests on the continent would only drain the kingdom without enriching it; and that England, from its situation, was not fitted to enjoy extensive empire. The young king, deaf to all remonstrances, and hurried away by his military ardour, resolved immediately to begin the war. But after several attempts, which were rendered unsuccessful only by the mismanagement of those who conducted them, a peace was concluded with France on the 7th Aug. 1514. Henry's arms were attended with more success in Scotland; where K. James IV. with the greatest part of the Scots nobility, and 10,000 men, were cut off in the battle of Flowden. See SCOTLAND. Henry in the mean time, puffed up with his success, continued to lavish his treasures by expensive pleasures, and no less expensive preparations for war. The old ministers, who had been appointed by his father to direct him, were now disregarded; and the king's confidence was entirely placed in Thomas, afterwards Cardinal, Wolsey, who seconded him in all his favourite pursuits, and had thus gradually raised himself to the first employments of the state. See WOLSEY. The king having soon exhausted all the treasures left him by his father, as well as the supplies which he could by fair means obtain from his parliament, applied to Wolsey for new methods of replenishing his coffers. The minister's first scheme was to get a large sum from the people under the title of *benevolence*; though no title could be more improperly applied, as it was not granted without the greatest murmurings and

complaints. Wolsey, having exacted a considerable sum from the clergy, next applied to the house of commons; but they only granted half the sum he demanded. The minister was highly offended, and desired to be heard in the house; but they replied, that none could be permitted to sit and argue there except members. Soon after, the king having occasion for new supplies, by Wolsey's advice attempted to procure them by his prerogative alone, without consulting his parliament. He issued out commissions to all the counties of England for levying 4 sh. in the pound from the clergy, and 3 sh. and 4 d. from the laity. This stretch of royal power was soon opposed by the people, and a general insurrection seemed ready to ensue. Henry endeavoured to pacify them by circular letters; in which he declared, that what he demanded was only by way of benevolence. The city of London, however, still hesitated, and in some parts of the country insurrections were actually begun. These were happily suppressed by the duke of Suffolk; but the cardinal lost somewhat of the king's favour on account of the imprudent advice he had given him. To reinstate himself in his good graces, Wolsey made the king a present of a noble palace called *Tork Place*, at Westminster, assuring him that from the first he had intended it for the king's use. In order to have a pretence for amassing more wealth, Wolsey next undertook to found two new colleges at Oxford; and for this purpose he received every day his grants from the pope and the king. The king imprudently gave him liberty to suppress monasteries, and make use of their revenues for the erection of his new colleges; but this was a fatal precedent for the pontiff's interests, as it taught the king to seize on the monastic revenues whenever he stood in need of money. For a considerable time Wolsey continued to enjoy the king's favour in an extreme degree; and as the monarch was ever more despotic than Henry VIII. no minister was ever more powerful than Wolsey. This extraordinary elevation, served only to render him all the more conspicuous, and himself more miserable, when it took place. Indeed he had long foreseen, from what he knew of the king's capricious temper, that it certainly would happen one time or other. The cause of his overthrow was Henry's desire of having his queen Catharine divorced. The doctrines of the reformation propagated by Luther in 1517, had gained considerable ground in England, and many professed a belief in them, notwithstanding the persecution which had been carried on against the heretics during some of the preceding reigns. The clergy had become so exceedingly corrupt, and were immersed in such monstrous ignorance, that they were universally hated even by their own party, while no regard at all was paid to their opinions, or rather they were looked upon with the utmost abhorrence, by the reformers. Even the papal authority, though still very great, had, in the greater space of time than ten years (viz. from 1517, when Luther first began to attack it,) declined very sensibly. The marriage of king Henry therefore being considered by all parties as illegal in itself, and only sanctified by a dispensation from the pope, had been frequently objected

different occasions. The states of Castile had proposed a marriage betwixt the emperor Charles and the English princess Mary, Henry's daughter, among other things the illegitimacy of her birth. The same objection afterwards occurred on opening a negotiation with France for a marriage with the duke of Orleans. Nor were these Henry's only motives. The queen was six years older than himself, her personal charms were decayed, and his affection lessened. All her children died in infancy except the princess Mary; and Henry was, or pretended to be, greatly affected with this. Another point of the utmost importance was the succession to the crown, which any question concerning the legitimacy of the king's marriage would involve in confusion; and the king of Scotland would step in as the next heir, and lay claim to the crown of England. But above all, Henry was influenced by the love he had now contracted for Anne Boleyn, who had lately been appointed maid of honour to the queen. See **BOLEYN**. In this station Henry had frequent opportunities of seeing her, and finding that his passion could not be gratified but by a marriage, he was thus obstinately set upon the divorce; for which purpose he sent his secretary to Rome to obtain from Clement VII. a bull for dissolving his marriage with Catharine. That he might not seem to entertain any doubt of the pope's prerogative, he insisted only on some grounds of nullity in the bull granted by Julius II. for the accomplishment of the marriage. In the preamble to this bull, it had been said, that it was granted on the solicitation of Henry himself; though it was known that he was then a youth under 12 years of age: it was likewise asserted, that the bull was necessary for maintaining the peace between the two crowns; though it is certain, that there was no appearance of a quarrel betwixt them. These false premises seemed to afford a good pretence for dissolving it; but, as matters then stood, the pope was involved in the utmost perplexity. Queen Catharine was aunt to the emperor, who had lately made Clement himself a prisoner, and whose resentment he still dreaded: and besides, he could not with any degree of prudence declare the bull of the former pope illicit, as this would give a mortal blow to the doctrine of papal infallibility. In the other hand, Henry was his protector and friend; the dominions of England were the chief source from whence his finances were supplied; and the king of France, some time before, had obtained a bull of divorce in circumstances nearly similar. In this exigence he thought the wisest method would be to spin out the affair by negotiation; and in the mean time he sent over a commission to Wolsey, in conjunction with the Archbishop of Canterbury or any other English prelate, to examine the validity of the king's marriage and of the former dispensation; granting them also a provisional dispensation for the king's marriage with any other person. The pope's message was laid before the council in England; but they considered, that an advice given by the pope in this secret manner might very easily be disavowed in public; and that a clandestine marriage would totally invalidate the legitimacy of any issue the king might have by such a match. In consequence of

this, fresh messengers were dispatched to Rome, and evasive answers returned; the pope never imagining that Henry's passion would hold out during the tedious course of an ecclesiastical controversy. But in this he was mistaken. The king of England had been taught to dispute as well as the pope, and valued himself greatly on his knowledge in theology; and to his arguments he added threats, telling him, that the English were but too well disposed to withdraw from the holy see; and that if he continued uncomplying, the whole kingdom would readily follow the example of their monarch, who should deny obedience to a pontiff that had treated him with such falsehood and duplicity. The king even proposed to his holiness, whether, if he were not permitted to divorce his present queen, he might not have a dispensation for having two wives at once? The pope, perceiving the king's eagerness, at last sent cardinal Campeggio as his legate to London; who, with Wolsey, opened a court for trying the legitimacy of the king's marriage with Catharine, and cited the king and queen to appear before them. The trial commenced the 31st May 1529; and both parties presented themselves. The king answered to his name when called: but the queen, instead of answering to hers, rose from her seat, and throwing herself at the king's feet, made a very pathetic harangue; which her dignity, her virtue, and misfortunes, rendered still more affecting. She told her husband, "That she was a stranger in his dominions, without protection, without counsel, and without assistance; exposed to all the injustice which her enemies were pleased to impose upon her: That she had quitted her native country, without any other resource than her connections with him and his family; and that, instead of suffering thence any violence or iniquity, she had been assured of having in them a safeguard against every misfortune: That she had been his wife during 20 years; and would here appeal to himself, whether her affectionate submission to his will had not merited other treatment than to be thus, after so long a time, thrown from him with indignity: That she was conscious,—he himself was assured,—that her virgin honour was yet unstained when he received her into his bed; and that her connection with his brother had been carried no farther than the mere ceremony of marriage: That their parents, the kings of England and Spain, were esteemed the wisest princes of their time, and had undoubtedly acted by the best advice, when they formed the agreement for that marriage, which was now represented as so criminal and unnatural: And that she acquiesced in their judgment, and would not submit her cause to be tried by a court, whose dependence on her enemies was too visible, ever to allow her any hopes of obtaining from them an equitable or impartial decision." Having spoken these words, the queen rose, and, making the king a low reverence, left the court; nor would she ever again appear in it. The legate having again summoned the queen to appear, on her refusal, declared her contumacious, and the trial proceeded in her absence. But when the business seemed to be nearly decided, Campeggio, on some frivolous pretences prorogued the court, and at

last transferred the cause before the see of Rome. All this time cardinal Wolsey seemed to be in the same dilemma with the pope. On the one hand, he was very solicitous to gratify the king his master, who had distinguished him by so many marks of favour; on the other he feared to offend the pope, whose servant he more immediately was, and who likewise had power to punish his disobedience. By attempting to please each party, he fell under the displeasure of all; so that he was at last left without a single friend in the world. The king was displeased on account of his not entering into his cause with the warmth he thought he had reason to expect; Anne Boleyn imputed to him the disappointment of her hopes; while Q. Catharine and her friends expressed the greatest indignation against him, on account of the part he had openly taken in her divorce. In this miserable situation the king sent him a message by the dukes of Norfolk and Suffolk, demanding the great seal: the cardinal refused to deliver it, till Henry wrote him a letter, on receipt of which it was instantly given up. The seal was bestowed on Sir Thomas More; a man who, besides elegant literary talents, was possessed of the highest capacity, integrity, and virtue. Wolsey was next commanded to depart from York-place palace, which was now seized by the king, and afterwards became the residence of the British sovereigns, under the name of *Whitehall*. All his furniture and plate, which seemed more proper for a monarch than a subject, was seized for the king's use. He was then commanded to retire to Esher, a country seat which he possessed near Hampton court, and there to wait the king's pleasure. One disgrace followed another; and his fall was at last completed, by a summons to London to answer a charge of high treason. This summons he at first refused to answer, as being a cardinal. However, being at length persuaded, he set out on his journey; but was taken ill, and died by the way. See *WOLSEY*. After the death of Wolsey, the king, by the advice of Cranmer, had the legality of his marriage debated in all the universities of Europe; (see *CRANMER*, N^o 1. § 1.) and the votes of these were obtained in his favour by dint of money. To a subdeacon he gave a crown, to a deacon two crowns, and so to the rest in proportion to the importance of their stations, or opinion. Being thus fortified by the opinions of the universities, and even of the Jewish rabbies (for them also he had consulted), Henry began to think he might safely oppose the pope himself. He began by reviving in parliament an old law against the clergy, by which all those who had submitted to the authority of the pope's legate were condemned to severe penalties. The clergy, to conciliate the king's favour, were obliged to pay a fine of £118,000. A confession was likewise extorted from them, that the king, and not the pope, was the supreme head of the church and clergy of England. An act was soon after passed against buying the best fruits, or a year's rent of all the bishoprics that fell vacant. After this the king privately married his beloved Anne Boleyn; and she proving with child soon after, he publicly owned her for his wife, and passed with her through London, with extraordi-

nary magnificence. The streets were strewn with flowers, and the walls of the houses hung with tapestry, and an universal joy seemed to be diffused among the people. The unfortunate queen Catharine, perceiving all further opposition to be vain, retired to Ampthill near Dunstable, where she continued the rest of her days in privacy and peace. Her marriage with Henry was at last declared invalid. The pope was no sooner informed of these proceedings, than he passed a sentence, declaring Catharine to be the king's only lawful wife; requiring him to take her again, and denouncing his censures against him in case of a refusal. Henry knowing that his subjects were entirely at his command, resolved to separate totally from the church of Rome. In 1534, he was declared head of the church by parliament; the authority of the pope was abolished; all tributes formerly paid to the holy see were declared illegal; and the king was entrusted with the collection to all ecclesiastical benefices. The nation came into the king's measures with joy, and took an oath called the *oath of supremacy*: all the credit which the popes had maintained over England in ages, was now overthrown at once; and now seemed to repine at the change, except those who were immediately interested by their dependence on Rome. But though the king thus separated from the church of Rome, he by no means adhered to the doctrines of Luther, which had been lately published. He had written a book against the celebrated reformer, which the pope pretended greatly to admire; and honoured king Henry, on that account, with the title of "*Defender of the faith*." This character he seemed to be determined to maintain, and therefore persecuted the reformers most violently. Many were burnt for denying the popish doctrines, while others were executed for maintaining the pope's supremacy. The countrymen knew not which side to take, and as both the new and old religions were equally persecuted, and as both parties equally courted the favour of the king, he was by that means enabled to assume an absolute authority over the nation. As the monks had all along shown the greatest resistance to Henry's ecclesiastical character, he resolved once to deprive them of the power of injuring him. He accordingly empowered Cromwell, secretary of state, to send commissioners into the several counties of England to inspect the monasteries; and to report with rigorous exactness the conduct of such as were found in them. The employment was readily undertaken by some courtiers of the court, whose names were Layton, London, Price, Gage, Petre, and Belasis. They are said to have discovered monstrous disorders in many of the religious houses; whole convents of women abandoned to all manner of lewdness; friars accomplices in their crimes; pious frauds every where committed, to increase the devotion and liberality of the people; and cruel and intemperate factions maintained between the inhabitants. Thus a general horror was excited against the communities; and therefore the king, in 1536, suppressed the lesser monasteries, amounting to 376 in number. Their revenues computed at £12,000 a-year, were confiscated to the king, besides

des their plate and other goods, computed at 100,000 more. In 1538, the greater monasteries were also demolished. The better to recon-
 the people to this great innovation, accounts
 e published of the detestable lives which the
 led in their convents. The relics also, and o-
 objects of superstitious veneration, were now
 ight forth, and became objects of derision to
 reformers. See RELICS. On this occasion
 was demolished the noted shrine of Thomas
 sket, commonly called *St Thomas of Canter-*
 . See BECKET, N. 2. The riches of it were in-
 ceivable when broken down; the gold with
 ch it was adorned filled two large chests that
 ung men could scarce carry out of the church.
 king, on the whole, suppressed 645 monas-
 2, of which 28 had abbots who enjoyed a
 in parliament; with 90 colleges, 2374 chan-
 and free chapels, and 110 hospitals. The
 revenue of these establishments amounted
 2161,100. The indignation excited by such an
 interrupted course of sacrilege at Rome, may
 sily imagined. In 1535, the king had ex-
 Bishop Fisher, who was created a cardinal
 in prison, and Sir Thomas More, for deny-
 his supremacy. When this was reported in
 7, numerous tracts were published all over the
 try, comparing the king of England to Cali-
 Nero, Domitian, and the most wicked ty-
 of antiquity. Clement VII. died about six
 this after he had threatened the king with a
 nce of excommunication; and Paul III. who
 ceded him, entertained some hopes of an ac-
 commodation. But Henry was so much accus-
 toed to domineering, that the quarrel was soon
 red totally incurable. The execution of
 er was reckoned such a capital injury, that at
 he pope passed all his censures against the king,
 gnum and all his adherents to appear in Rome
 in 90 days, to answer for their crimes. If
 tailed, he excommunicated them; deprived
 king of his realm; subjected the kingdom to
 sterdict; he declared his issue by Anne Boleyn
 kimate; dissolved all leagues which any Ca-
 ic princes had made with him; gave his king-
 to any invader; commanded the nobility to
 up arms against him; freed his subjects from
 oaths of allegiance; cut off their commerce
 foreign states; and declared it lawful for any
 to seize them, to make slaves of their persons,
 to convert their effects to his own use. But
 gh these censures were then passed, they were
 openly denounced. The pope delayed the
 lication till he should find an agreement with
 and totally desperate, and till the emperor,
 was then hard pressed by the Turks and Pro-
 tinent princes of Germany, should be in a condi-
 to carry the sentence into execution. But
 1538, when news arrived at Rome that Henry
 suppressed the monasteries, the pope publish-
 the censures against him. Libels were again
 ersed, in which he was anew compared to the
 k furious persecutors of antiquity, and the
 sentence was now given on their side. Henry,
 ras said, had declared war with the dead, whom
 Pagans themselves had respected; was at open
 ay with heaven; and had engaged in offen-
 sive hostility with all the saints and angels. Above

all, he was reproached with his resemblance to
 the emperor Julian, whom (it was said) he imita-
 ted in his apostacy and learning, though he fell
 short of him in his morals. But these terrible
 fulminations had now lost their effect. Henry had
 long ago denied the supremacy of the pope, and
 therefore had appealed from him to a general
 council; but now, when a general council was
 summoned at Mantua, he refused to be subject
 to it, because it was called by the pope, and lay
 entirely under the subjection of that spiritual usur-
 per. He engaged his clergy to make a declara-
 tion to the like purpose, and prescribed to them
 many other alterations with regard to their an-
 cient tenets and practices. It was expected, that
 his opposition to the church of Rome would have
 at last made him fall in with the doctrines of the
 reformed; but though he had been gradually
 changing the theological system in which he was
 educated, ever since he came to the years of ma-
 turity, he was as positive and dogmatical in the
 few articles he retained, as if the whole fabric had
 continued entire and unshaken: and though he
 stood alone in his opinion, the flattery of courtiers
 had so much inflamed his tyrannical arrogance,
 that he thought himself intitled to regulate by his
 own standard, the religious faith of the whole na-
 tion. The point on which he chiefly rested his
 orthodoxy was the most absurd in the whole po-
 pish doctrine, namely, that of TRANSUBSTANTI-
 ATION. All departure from this he held to be a
 damnable error; and nothing, he thought, could
 be more honourable for him, than, while he broke
 off all connection with the Roman pontiff, to main-
 tain, in this essential article, the *purity* of the Ca-
 tholic faith. In 1539, a parliament was called,
 which met on the 28th of April. The chancellor
 opened this parliament by informing the house
 of lords, that it was the king's earnest desire to
 extirpate from his kingdom all diversity of opi-
 nions with regard to religion; and as this enter-
 prise was difficult, he desired them to choose a com-
 mittee from among themselves, who might frame
 certain articles, and communicate them afterwards
 to parliament. The lords named the vicar general
 Cromwell, now created a peer, the archbishops
 of Canterbury and York, the bishops of Durham,
 Carlisle, Worcester, Bath and Wells, Bangor,
 and Ely. This small committee itself was agitated
 with such diversity of opinions, that it could come
 to no conclusion. The duke of Norfolk then
 moved, that since there was no hope of having
 a report from the committee, the articles of faith
 proposed to be established should be reduced to
 six, and a new committee be appointed to frame
 an act with regard to them. As this peer was un-
 derstood to speak the king's mind, his motion
 was immediately complied with; and after a short
 prorogation, the bill of the six articles, or the
bloody bill, as the Protestants justly termed it, was
 introduced; and having passed the two houses,
 received the king's assent. By this law the doc-
 trine of the real presence was established; the
 communion in one kind; the perpetual obliga-
 tion of vows of chastity; the utility of private
 masses; the celibacy of the clergy; and the ne-
 cessity of auricular confession. The denial of the
 real presence subjected the person to death by fire,

and to the same forfeiture as in cases of treason ; and admitted not the privilege of abjuring ; an unheard of cruelty, unknown even to the inquisition itself. The denial of any of the other articles, even though recanted, was punishable by the forfeiture of goods and chattels, and imprisonment during the king's pleasure ; an obstinate adherence to error, or a relapse, was adjudged to be felony, and punishable by death. The marriage of priests was subjected to the same punishment. Their commerce with women, was, for the first offence forfeiture and imprisonment ; and for the second, death. Abstaining from confession, and from receiving the eucharist at the accustomed times, subjected the person to fine, and to imprisonment during the king's pleasure ; and if the criminal persevered after conviction, he was punishable by death and forfeiture. Commissioners were to be appointed by the king for inquiring into heresies and irregular practices, and the criminals were to be tried by jury. The parliament having thus surrendered their ecclesiastical privileges, next proceeded to surrender their civil ones also. They gave to the king's proclamations the same force as to statutes enacted by parliament, and thus by one blow made a total subversion of the English constitution ; and to render the matter worse, if possible, they framed this law as if it were only declaratory, and intended to explain the natural extent of the royal authority. Notwithstanding this, however, they afterwards pretended to make some limitations to the regal power ; and they enacted, that no proclamation should deprive any person of his lawful possessions, liberties, inheritances, &c. nor yet infringe any common law or laudable custom of the realm. As soon as the act of the six articles had passed, the Catholics were extremely vigilant to inform against offenders ; and, in a short time, no fewer than 500 persons were thrown into prison. But some of the chief officers of state remonstrating against the cruelty of punishing a number of delinquents, they were all set at liberty ; and soon after this, Henry, as if he had resolved to give each party the advantage by turns, granted everyone permission to have a translation of the Bible, which had been newly made, in his family. In 1540, the king again complained to parliament of the great diversity of religious tenets which prevailed among his subjects ; a grievance, he affirmed, which ought to be endured, because the scriptures being now published in English, ought universally to be the standard of belief. But he had appointed, he said, some bishops and divines to draw up a list of tenets ; and he was determined that Christ and the truth should have the victory ; whence he seems to have expected more from this new book of his doctors, than had ensued from the publication of the scriptures. Cromwell, as vicar general, also made a speech in the upper house ; and the peers in return told him, that he deserved to be vicar general to the universe : To such a degree of mean submission was the English parliament at this time reduced. This year also the king suppressed the only religious order remaining in England, viz. the knights of Malta, or St John of Jerusalem. This order had by their valour done great service to Christen-

dom ; and had very much retarded, at Jerusalem, Rhodes, and Malta, the rapid progress of the Turks. During the general surrender of the religious houses in England, they had obstinately refused to give up their revenues to the king ; Henry, who would endure no society that professed obedience to the pope, had recourse to parliament for the dissolution of this order. Their revenues were large, and formed a considerable addition to the acquisitions which the king had already made. But he had been such a bad confidant, that, notwithstanding the immense profit afforded him by the church, he now demanded from parliament a very considerable supply. The commons, however, though lavish of the blood of their fellow subjects, were extremely frugal of their money ; and it was not without much ado that the grant could be obtained, even by this sordid and dreaded monarch. The king all the time continued to punish with unrelenting severity the Protestants who offended against any of the six articles, and the Papists who denied supremacy ; which gave occasion to a friend at that time to say, that those who were against the Pope were burned, and that those who were for him were hanged. The king even seemed to display his tyrannical impartiality, which reduced both parties to subjection. This year executed 3 Protestants and 3 Papists coupled together. The latter declared, that the most grievous part of their punishment was the being consigned to such heretical miscreants as suffered with them. In 1542, Henry proceeded to the further dissolution of colleges, hospitals, and other foundations of a secular nature. The courtiers had been dealing with the presidents and governors to make a surrender of their revenues to the king ; and had succeeded. But there was an obstacle to their farther progress, it had been provided by the local statutes of many of these foundations, that no president or fellows could make such a deed without the unanimous consent of all the fellows. This could not have been easily obtained ; but the parliament annulled all these statutes, by which means the revenues of those houses were open to the rapacity of the king and his favourites. Henry also now extorted from many bishops the surrender of their chapter lands ; by which he pillaged the sees of Canterbury, York, London, and enriched his favourites with the spoils. He engaged the parliament to enforce the penalties of the six articles, as far as respected the marriage of priests, which was now only subjected to a forfeiture of goods, chattels, and during life : but he was still bent on maintaining a rigid purity in speculative opinions. He appointed a commission consisting of two bishops and several bishops of both provinces together with a considerable number of doctors of divinity ; and by virtue of his ecclesiastical supremacy he had charged them to choose a religion for his people. Before the commissioners, however, had made any progress in this undertaking the parliament had passed a law by which he ratified all the tenets which these divines had established with the king's consent ; and thus they were not ashamed of declaring expressly, that they

their religion upon trust, and had no other either in religious or temporal concerns than arbitrary will of their master. One clause of statute, however, seems to favour somewhat the spirit of liberty. It was enacted, that the ecclesiastical commissioners should establish nothing repugnant to the laws and statutes of the realm.

In reality this proviso was inserted by the king, to serve his own purposes. By introducing confusion and contradiction into the laws, he became more the master of every one's life and property; and as the ancient independence of the realm still gave him jealousy, he was well pleased under colour of such a clause, to introduce appeals from spiritual to civil courts. For the reason he would never promulgate a body of canon law; and he encouraged the judges on occasions to interpose in ecclesiastical causes, never they thought the law or the prerogative served. Being thus armed by the authority of parliament, or rather by their acknowledgment of spiritual supremacy, the king employed his commissioners to select a system of tenets for the faith and belief of the nation. A small volume published, under the title of *The Institution of a Christian Man*, which was received by the convocation, and made the inflexible standard of orthodoxy. In this book the points of justification, free will, good works, and grace, were discussed in a manner somewhat favourable to the notions of the reformers; while the sacraments, a few years before were only allowed to be seven, were now increased to seven, conformably to the sentiments of the Catholics. Throughout the whole of this book the king's caprice is very visible; and the book is in reality to be read as his composition. For Henry, while he held his opinion a rule for the nation, would not submit to no authority whatever; not even to which he had formerly established. The next year the people had a farther instance of the king's inconsistency. He ordered a new book to be composed, called the *Brudition of a Christian*; and without asking the consent of the convocation, he published by his own authority this model of orthodoxy. He was no less positive in his new creed than he had been in his old; though he required the faith of the nation to be about to his signal, he was particularly careful to inculcate the doctrine of passive obedience in his books, and he was no less careful to retain the nation in the practice. But while the king was thus spreading his own books among the people, both he and the clergy seem to have been much perplexed with regard to the scriptures. A review had been made by the ecclesiastical synod of the new translation of the Bible; Bp. Gardiner had proposed, that instead of using English expressions throughout, several Latin words should still be preserved, because they contained, as he pretended, such peculiarity and significance, that they had no corresponding terms in the English tongue. Among these were *ecclesia*, *penitentialia*, *pontifex*, *contritus*. But as this mixture would appear extremely barbarous, and was evidently calculated for other purpose, than to retain the people in their ancient ignorance, the proposal was rejected.

The knowledge of the people, however, seemed to be still more dangerous than their ignorance; and the king and parliament, soon after the publication of the scriptures, retracted the concession which they had formerly made, and prohibited all but gentlemen and merchants to peruse them. Even that liberty was not granted without an apparent hesitation, and dread of the consequences. These persons were allowed to read, *so it be done quietly and with good order*. And the preamble to the act sets forth, "That many seditious and ignorant persons had abused the liberty granted them of reading the Bible; and that great diversity of opinion, animosities, tumults, and schisms, had been occasioned by perverting the sense of the scriptures." The mass book also passed under the king's examination; but little alteration was yet made in it. Some doubtful or fictitious saints only were struck out; and the name of the pope was erased. The latter precaution was also used with every new book that was printed, and even every old one that was sold. The word *pope* was carefully omitted or blotted out; as if that precaution could abolish the term from the language, or cause the people to forget that such a person existed. About this time also, the king prohibited the acting of plays, interludes, and farces, in derision of the Popish superstitions; which the Protestants had been in use to practise; and this prohibition was in the highest degree pleasing to the Roman Catholics. In this tyrannical manner Henry proceeded with regard to ecclesiastical affairs. In other respects his conduct was equally violent. With regard to his domestic concerns, history scarce affords his parallel. His affection for Anne Boleyn was carried to such a height, that he procured an act excluding from the succession the issue of Q. Catharine, in favour of the children of Anne Boleyn; and failing them to the king's heirs for ever. An oath to this purpose was likewise enjoined, under penalty of imprisonment during the king's pleasure, and forfeiture of goods and chattels. All slander against the king and his new queen or their issue, was subjected to the penalty of treason or misprison of treason. The unfortunate queen Catharine died, in her retreat at Amplehill, in 1536. On her death-bed she wrote a most pathetic letter to the king, in which she forgave him all the injuries she had received, and recommended to him in the strongest terms their daughter the princess Mary. This letter affected Henry so much, that he could not read it without tears; but the new queen is said to have exulted on hearing of the death of her rival. Her triumph, however, was of short duration. Henry had no sooner possessed her, secure from every disquieting thought by the death of queen Catharine, than his passion began to decline; and to this her delivery of a dead son did not a little contribute; for so impetuous and absurd were his passions, and such was his desire for male issue, that this disappointment was sufficient to alienate his affection. The levity of her temper, and her extreme gaiety of behaviour, also gave an opportunity to her enemies of enflaming the king's jealousy. The viscountess of Rocheford, in particular, a woman of profligate manners, and who was married to the queen's brother,

ther, had the cruelty to report to the king that her husband committed incest with his own sister. After being satiated with the possession of her for six years, perhaps Henry really doubted her fidelity; but his doubts were confirmed by the beauty of Jane Seymour, with whom he had now fallen in love. Had Anne Boleyn really been guilty, her monster of a husband might have allowed her to live; but his cruelty was as unbounded as his other perverse passions. She was condemned; and the sentence pronounced against her was, that she should be burned or beheaded at the king's pleasure. On hearing this dreadful denunciation, she exclaimed, "O Father! O Creator! thou who art the way, the truth, and the life! thou knowest that I have not deserved this fate." She then made the most solemn protestations of innocence before her judges; but these could now avail nothing. Anne was beheaded by the executioner of Calais, who was reckoned more expert than any in England; and Henry married his beloved Jane Seymour. His satisfaction, however, was of no long continuance: for the queen, becoming pregnant immediately after marriage, died in two days after the birth of the child; who being a son, was baptised by the name of *Edward*. As this lady had been more beloved by Henry than any of his wives, his grief for the loss of her was extreme. However, it did not hinder him from entering very soon afterwards into a new matrimonial scheme; in which he met with many difficulties. His first proposals were made to the duchess dowager of Milan, niece to the emperor and to Catharine his own former queen; but as he had behaved so ill to the aunt, it is scarce to be supposed that his addresses could prove agreeable to the niece. On this he demanded the duchess dowager of Longueville, daughter of the duke of Guise; but on making the proposal to the French monarch, Francis I. he was informed that the princess had been already betrothed to the king of Scotland. Negotiations were afterwards entered into for a German match; and the princess of Cleves was proposed by Cromwell, on account of the great interest her father had with the Protestant princes of Germany. Henry had also become enamoured of her person from a picture of her he had seen; but this was drawn so much to the advantage, that when the negotiation was quite finished, and the bride arrived in England, he lost all patience, swearing that she was a great *Flanders mare*, and that he could never bear her the smallest affection. The matter was still worse, when he found that she could speak no language but Dutch, of which he was entirely ignorant. Notwithstanding all these objections, however, he resolved to complete the marriage, telling Cromwell, that since he had gone so far he must now put his neck into the yoke. The reason was, that the friendship of the German princes was now more than ever necessary for Henry; and it was supposed, that the affront of sending the princess back to her own country might be repented. Cromwell, who knew that his own life depended on the event, was anxious to learn from the king how he liked his spouse after having passed a night with her; but was struck with terror when he replied that he now hated her more than ever; that he was re-

solved not to cohabit with her, and even suspected that she was not a virgin; a matter in which he pretended to be a *connaisseur*. His aversion soon increased to such a degree, that he determined to get rid of his queen and prime minister both at once. Cromwell had long been an object of aversion to the nobility, who hated him on account of his obscure birth. See CROMWELL, N° 3. He had also fallen under the displeasure of both Protestants and Papists; the former hating him on account of his concurrence with Henry in the persecution, and the latter looking upon him as the greatest enemy of their religion. To these unfortunate circumstances, was added the usual gratification of Henry himself, who had fallen in love with Catharine Howard, niece to the duke of Norfolk to enjoy whom, he now determined to divorce the queen. By the insinuations of this lady and her uncle, Cromwell's ruin was accomplished; and he was condemned without either trial or examination. He was terribly mangled by the executioner before his head could be struck off. His death was soon followed by the dissolution of the marriage with the princess of Cleves, which was annulled by the consent of both parties. The princess parted from him with great indignation and accepted of L. 3000 a-year as a compensation, but refused to return to her own country at the affront she had received. The king's marriage with Catharine Howard soon followed the dissolution of that with Anne of Cleves; but the event may surely be regarded as a providential punishment upon this tyrant. His insinuations against the virtue of the unfortunate princess of Cleves, were amply repaid by the actual infidelities of his new queen, whom he believed to be a pure virgin at the time he married her. So he indeed did he imagine himself in this new marriage that he publicly returned thanks for his conjugal felicity, when a most unfortunate information concerning the queen's incontinence was given by one Lascelles, whose sister had been a servant to the duchess dowager of Norfolk. This not only gave intelligence of her amours before marriage, but affirmed that she had continued the same criminal practices ever since. Two of her paramours were arrested, and confessed the crimes: the queen herself also confessed guilt before marriage, but denied having ever been to the king's bed; which, however, had very great probability. She was beheaded on Tower Hill along with the viscountess of Rochford, who had been a confidant in her amours, and who was unpitied, as she had been a principal instrument in the destruction of Anne Boleyn; while the notorious character of that unfortunate queen received an additional confirmation from the disclosure of this woman's guilt. To secure himself from any farther disasters of this kind, Henry passed a most extraordinary law, enacting that any person who should know, or strongly suspect any guilt in the queen, might, within 20 days, disclose the same to the king or council, without incurring the penalty of any former law against defaming the queen; though at the same time every one was prohibited from spreading the matter abroad, or even privately whispering it to others. It was also enacted, that if the king married any woman,

had been incontinent, taking her for a true maid, she should be guilty of treason if she did not previously reveal her guilt to him. These laws afforded diversion to the people, who now said that the king must look out for a *widow*; as no reputed maid would ever run the risk of incurring the penalty of the statute. This in truth happened to be the case at last; for about a year after the death of Catharine Howard, he married, for his sixth wife, Catharine Parr, widow of Nevil, lord Latimer. This lady being inclined to the doctrines of the reformation, and having the boldness to tell her husband her mind, had like to have shared the fate of the rest. The furious monarch, incapable of bearing the least contradiction, instantly complained to Bp. Gardiner, who inflamed the quarrel as much as possible; so that at last he king consented that articles of impeachment should be drawn up against her. But these were rendered abortive by the prudence and address of the queen. See PARR, N° 1. All this time Henry tyrannized over his nobility in the most cruel manner. The old countess of Salisbury, the last of the house of Plantagenet, was executed with circumstances of great barbarity. She had been condemned, as usual, without any trial; and when brought to the scaffold, refused to lay her head on the block in obedience to a sentence, to the effect of which she had never consented. She told the executioner, therefore, that if he would save her head, he must win it the best way he could; and thus she ran about the scaffold, pursued by the executioner, who aimed many fruitless blows at her neck, before he was able to put an end to her life. Soon after, lord Leonard Grey was likewise executed for treason. The last instances of the king's injustice and cruelty were the case of Norfolk and his son the earl of Surry. The former had served the king with fidelity, and the latter was a young man of the most promising hopes. His qualifications, however, were no security against the violence of Henry's temper. He had dropped some expressions of resentment against the king's ministers, who had displaced him from the government of Boulogne; and the whole family had become obnoxious on account of the late queen Catharine Howard. From these motives, orders were given to arrest both the father and son. The duchess dowager of Richmond, Henry's own sister, was among the number of his accusers; and Sir Richard Southwell, his most intimate friend, charged him with infidelity to the king. Surry denied the charge, and challenged his accuser to a single combat. This favour was denied him; and, notwithstanding his eloquent and spirited defence, he was condemned and executed at Tower Hill.—The duke of Norfolk in vain endeavoured to mollify the king by letters and submissions. An attainder was found against him, though the only crime his accusers could allege was, that he had once said that the king was wicked, and could not hold out long; and that the kingdom was likely to be torn between the contending parties of different persuasions: Cranmer, though engaged for many years in an opposite party to that of Norfolk, and though he had received many and great injuries from him, would have no hand in such an unjust prosecution; but

retired to his seat at Croydon. The death warrant, however, was made out, and immediately sent to the lieutenant of the Tower; but a period was put to the cruelties and violence of the king by his death, on the 14th Jan. 1547, the night before Norfolk was to have been executed.

(39.) ENGLAND, HISTORY OF, UNDER K. EDWARD VI. Henry was succeeded by his son Edward, a boy of 9 years of age. The most remarkable transactions of his reign are those with regard to religion. The restraint which Henry VIII. had laid upon the Protestants was now taken off; and they not only maintained their doctrines openly, but soon became the prevailing party. Henry had fixed the majority of his son at 18 years of age; and, in the mean time, appointed 16 executors of his will, to whom, during the minority, he entrusted the government of the king and kingdom. This will, he imagined, would be obeyed as implicitly after his death as if he had been alive. But the first act of the executors was to choose the earl of Hertford, afterwards duke of Somerset, protector of the realm; and in him was lodged all the regal power, together with a privilege of naming whom he pleased for his privy council. The duke of Somerset had long been reckoned a secret partisan of the reformers; and immediately on his elevation to this dignity, began to reform the abuses of the ancient religion. Under his direction and that of Cranmer, therefore, the reformation was carried forward and completed. The only person of consequence who opposed the reformers was Gardiner bishop of Winchester; and, to the disgrace of their own principles, the reformers now showed that they could persecute as well as the Papists. Gardiner was committed to the Fleet prison, where he was treated with great severity. He was afterwards sent to the Tower; and having continued there two years, he was commanded to subscribe several articles, among which was one confessing the justice of his own imprisonment. To all the articles but this he agreed to subscribe; but that did not give satisfaction. He was then committed to close custody; his books and papers were seized; all company was denied him, and he was not even permitted the use of pen and ink. The bishops of Chichester, Worcester, and Exeter, were in like manner deprived of their offices; but the bishops of Landaff, Salisbury, and Coventry, escaped by sacrificing the most considerable share of their revenues. The libraries of Westminster and Oxford were ordered to be ransacked, and purged of the Romish legends, missals and other superstitious volumes; in which search, great devastation was made even in useful literature. Many volumes clasped in silver were destroyed for the sake of their rich bindings; many of geometry and astronomy were supposed to be magical, and destroyed on that account; while the members of the university, trembling for their own safety, were unable to put a stop to these ravages. A commission was next granted to the primate and others, to search after all Anabaptists, heretics, or contemners of the new liturgy. Among the numbers who were found guilty upon this occasion, was one Joan Boucher, commonly called *Joan of Kent*; who was so very obstinate, that the commissioners

missioners could make no impression upon her. She maintained an abstruse metaphysical sentiment, that Christ, as man, was a sinful man; but, as the Word, he was free from sin, and could be subject to none of the frailties of the flesh with which he was clothed. For maintaining this absurd doctrine, the poor woman was condemned to be burnt as an heretic. The young king, who it seems had more sense than his teachers, refused at first to sign the death-warrant: but at last, being overcome by the importunities of Cranmer, he reluctantly complied; declaring, that if he did wrong, the sin should be on the head of those who had persuaded him to it. The primate, after making another unsuccessful effort to reclaim the woman from her opinions, committed her to the flames. Some time after, one Van Paris, a Dutchman, was condemned to death for Arianism. He suffered with so much satisfaction, that he hugged the faggots that were consuming him. The rest of this reign affords only the history of intrigues and cabals of the courtiers. The protector was first opposed by his own brother admiral Sir Thomas Seymour, who had married Catharine Parr the late king's widow. She died soon after the marriage; and he then made his addresses to the princess Elizabeth, who is said not to have been averse to the match. His brother the duke, being informed of his ambitious projects, had him attainted of high treason, and at last condemned and executed. The duke of Somerset himself, however, was some time afterwards deprived of his office by Dudley duke of Northumberland; who at last got him accused of high treason, and executed. Not satisfied with the office of protector, which he assumed on the death of Somerset, this ambitious nobleman formed a scheme of engrossing the sovereign power altogether. He represented to Edward, who was now in a declining state of health, that his sisters Mary and Elizabeth, who were appointed by Henry's will to succeed, in failure of direct heirs, to the crown, had both been declared illegitimate by parliament; that the queen of Scots his aunt, stood excluded by the king's will; and being an alien also, lost all right of succeeding. The three princesses being thus excluded, the succession naturally devolved to the marchioness of Dorset, eldest daughter of the French queen, Henry's sister, who had married the earl of Suffolk after her first husband's death. The next heir to the marchioness was lady Jane Grey, a lady universally respected, both on account of the charms of her person, and the virtues and endowments of her mind. The king, who was accustomed to submit to the politic views of this minister, agreed to have the succession submitted to council, where Northumberland hoped to procure an easy concurrence. The judges, however, who were appointed to draw up the king's letters patent for this purpose, warmly objected to the measure; and gave their reasons before the council. They begged that a parliament might be summoned, both to give it force, and to free its partisans from danger: they said that the form was invalid, and would not only subject the judges who drew it, but every counsellor who signed it, to the pains of treason. Northumberland could not brook

their demurs; he threatened them with his authority, called one of them a *traitor*, and said he would fight with any man in his shirt in such a just cause as that of lady Jane's succession. A method was therefore found out of screening the judges from danger, by granting them the king's pardon for what they should draw up; and at length the patent for changing the succession was completed, the princesses Mary and Elizabeth were set aside, and the crown settled on the heir of the duchess of Suffolk, for she herself was contented to forego her claim. For some time the king had languished in a consumption. After this settlement of the crown, his health visibly declined every day, and little hopes were entertained of his recovery. To make matters worse, his physicians were dismissed by Northumberland's advice, and by an order of council; and he was put into the hands of an ignorant old woman, who undertook in a little time to restore him to health. After the use of her medicines, all his bad symptoms greatly increased. He felt a difficulty of speech and breathing; his pulse failed, his legs swelled, his colour became livid, and many other signs of approaching death made their appearance. He expired at Greenwich, on the 6th of July, 1553, in the 16th year of his age, and 7th of his reign.

(40.) ENGLAND, HISTORY OF, UNDER MARY. After the death of king Edward, very little regard was paid to the new patent by which Lady Jane Grey had been declared heir to the throne. The undoubted title of Mary, notwithstanding the scandalous behaviour of her father and his former parliaments, was acknowledged by the whole nation. Northumberland, however, was resolved to put the late king's will in execution. He therefore carefully concealed the death of Edward, in hopes of securing the person of Mary, who by an order of council had been required to attend her brother during his illness; but the being informed of his death, immediately prepared to assert her right to the crown. Northumberland then, accompanied by the duke of Suffolk, the earl of Pembroke, and some other noblemen, saluted lady Jane Grey queen of England. Jane was in a great measure ignorant of these transactions, and it was with the utmost difficulty she was persuaded to accept of the dignity conferred upon her. At last she complied, and suffered herself to be conveyed to the Tower, where it was then usual for the sovereign of England to pass some days after their accession. Mary, however, who had retired to Kenninghall in Norfolk, in a very few days found herself at the head of 40,000 men; and lady Jane resigned the sovereignty in ten days, with much more pleasure than she had received it. She retired with her mother to their own habitation; and Northumberland finding his affairs quite desperate, attempted to quit the kingdom. But he was stopped by the band of pensioner guards, who informed him that he must stay to justify their conduct in taking arms against their lawful sovereign. He therefore surrendered himself to Mary; and was soon after executed, together with Sir John Gates and Sir Thomas Palmer, two infamous tools of his power. Sentence was also pronounced against lady Jane Grey and her husband lord Guildford; but without any intention of putting it in execution.

tion against them at this time, as their youth and innocence pleaded so strongly in their favour, neither of them having yet reached their 17th year. Mary now entered London, and was peaceably settled on the throne without any effusion of blood. The English, however, soon found reason to regret their attachment to her cause. Though she had at first solemnly promised to defend the religion and laws of her predecessor, she no sooner saw herself firmly established on the throne, than she resolved to restore the Popish religion, and give back their former power to the clergy. Gardiner, Bonner, and the other bishops who had been imprisoned or suffered loss during the last reign, were taken from prison, reinstated in their sees, and now triumphed in their turn. On presence of discouraging controversy, the queen by her prerogative silenced all preachers throughout England, except such as should obtain a particular licence, and this she was resolved to give only to those of her own persuasion. The greater part of the foreign Protestants left the kingdom; and many of the arts and manufactures, which they had successfully introduced, fled with them. Soon after, the queen called a parliament, which seemed willing to concur in all her measures. They at once repealed all the statutes with regard to religion, that had passed during the reign of Edward VI. and the national religion was again placed on the same footing in which it had been at the death of Henry VIII. To strengthen the cause of the Catholics, and give the queen more power to establish the religion to which she was so much attached, a proper match was to be sought for her. Her affection seemed to be engaged by the earl of Devonshire; but as he was rather attached to the princess Elizabeth, he received the overtures from the queen with neglect. The next person mentioned as a proper match for her was cardinal Pole, a man greatly respected for his virtues; but as he was now in the decline of life, Mary soon dropped all thoughts of that alliance. At last she cast her eye on Philip II. of Spain, son to the emperor Charles V. He was then in the 27th year of his age, and consequently agreeable in that respect to Mary, who was in her 48th year; but when her intentions with regard to this match became known, the greatest alarm took place throughout the whole nation. The Commons presented such a strong remonstrance against a foreign alliance, that the queen dissolved the parliament to get quit of their importunity. To obviate, however, all clamour, the articles of marriage were drawn up as favourably as possible for the interests of England. It was agreed, that though Philip should have the title of king, the administration should be entirely in the queen; that no ruler should be capable of holding any office in the kingdom; nor should any innovation be made in the laws, customs, and privileges of the people; that Philip should not carry the queen abroad without her consent, or any of her children without the consent of the nobility. £60,000 a year were to be settled upon her as a jointure; and the male issue of this marriage were to inherit the crown of England: and in case of the death of Philip, Philip's son by his former marriage,

without any heir, the queen's issue should inherit all the rest of the Spanish dominions also. All these concessions, however, were not sufficient to quiet the apprehensions of the people; they were considered merely as words of course, which might be retracted at pleasure; and the whole nation murmured loudly against a transaction so dangerous to its ancient independence. An insurrection was raised by Sir Thomas Wyatt, a Roman Catholic, at the head of 4000 men, who set out from Kent to London, publishing a declaration against the Spanish match and the queen's evil counsellors. Having advanced as far as Southwark, he required that the queen should put the Tower of London into his hands; that she should deliver 4 counsellors as hostages; and, to ensure the liberty of the nation, should marry an Englishman. But his force was by far too small to support such demands; and he wasted so much time without attempting any thing of importance, that the popular ferment entirely subsided, his followers abandoned him gradually, and he was at last obliged to surrender himself. His followers were treated with great cruelty, no fewer than 400 of them suffering by the hand of the executioner; 400 more were conducted with ropes about their necks into the queen's presence, and there received their pardon. Wyatt himself was condemned and executed. This rebellion had almost proved fatal to the princess Elizabeth, who for some time past had been treated with great severity by her sister. Mary, who possessed a most cruel and vindictive disposition, had never forgot the quarrel between their mothers; and when a declaration was made after her own accession, recognising Q. Catharine's marriage as legal, she was thus furnished with a pretence for accounting Elizabeth illegitimate. She was likewise obnoxious on account of her religion, which Elizabeth at first had not prudence to conceal; though afterwards she learned to disguise her sentiments. But above all, her standing so high in the affection of the earl of Devonshire, was a crime not to be forgiven; and Mary made her sensible of her displeasure by numberless mortifications. She was ordered to take place at court after the duchess of Suffolk and the countess of Lennox; to avoid which, and other indignities, Elizabeth at last retired from court altogether into the country. After the suppression of Wyatt's rebellion she was committed to the Tower, and underwent a strict examination before the council; but as Wyatt had made a declaration on the scaffold, that she was in no way concerned, the queen found herself under a necessity of releasing her. To get rid of such a troublesome rival, however, she was offered in marriage to the duke of Savoy; and on Elizabeth's declining the proposal, she was committed close prisoner to Woodstock. The rebellion proved fatal, however, to many persons of distinction, and gave the queen an opportunity of manifesting that unbounded cruelty which reigned in her heart. The Tower and all the prisons in the kingdom were filled with nobility and gentry, who became objects of royal vengeance, more on account of their credit and interest with the people, than any concern they were supposed to have had with Wyatt. Sir Ni-

cholas Throgmorton was tried in Guildhall; but as no satisfactory evidence appeared against him, the jury gave a verdict in his favour. The queen was so much enraged, that she recommitted him to the Tower, summoned the jury before the council, and at last sent them all to prison, fining them afterwards some of 1000*l.* and others of 200*l.* each. Sir John Throgmorton, brother to Sir Nicholas, was condemned and executed, upon evidence which had been already rejected as insufficient. But of all those who perished on this occasion, none excited more universal compassion than the unfortunate Lady Jane Grey and her husband Lord Guildford Dudley. They had already received sentence of death, and two days after the execution of Wyatt, they received orders to prepare for eternity. Lady Jane, who had long been in expectation of this, was no way intimidated, but received the news with the most heroic resolution. The place intended at first for their execution was Tower-hill; but the council dreading the effects of the people's compassion for their youth, beauty, and innocence, ordered them to be beheaded within the Tower. The duke of Suffolk, whose ambition had been the cause of his daughter's unhappy fate, was soon after tried, condemned, and executed. Sir Thomas Grey also lost his life on the same account; but the cruel spirit of Mary was still unsatisfied; and finding herself universally odious, that she might free herself from any apprehensions for what was past, as well as tyrannize with the more freedom in time to come, she disabled the people from resistance, by ordering general musters, and causing the commissioners seize their arms and lay them up in forts and castles. Notwithstanding this unpopularity, however, the rebellion of Wyatt had so strengthened the hands of government, that a parliament was assembled in hopes of gratifying the queen's wishes in regard to her marriage with Philip. To facilitate this, the emperor Charles V. sent over to England 400,000 crowns to be distributed among the members of parliament in bribes and pensions; a practice of which there had hitherto been no example in England. The queen, notwithstanding her bigotry, resumed the title of *Supreme Head of the Church*, which she had dropped three months before. Gardiner made a speech, in which he proposed, that they should invest the queen with a legal power of disposing of the crown, and appointing her successor; but the parliament, however obsequious in other respects, did not choose to gratify their sovereign in a measure by which the kingdom of England might become a province of the Spanish monarchy. They would not even declare it treason to imagine or attempt the death of the queen's husband during her life time, though they agreed to ratify the articles of marriage. Finding therefore that the parliament was not yet sufficiently obsequious, it was thought proper to dissolve them. Soon after this the marriage with Philip was solemnized; but as the latter had espoused his queen merely with a view to become king of England, he no sooner found himself disappointed in this, than he showed a total want of affection for her. He passed most of his time at a distance from her in the Low Countries; and sel-

dom wrote to her except when he wanted money, with which Mary was at all times ready to supply him as much as in her power. The enemies of the state being supposed to be suppressed, the enemies of the Catholic faith were next persecuted and the old sanguinary laws were revived. Orders were given, that the priests and bishops who had married should be ejected; that the mass should be restored, and the pope's authority re-established; and that the church and its privileges all but their goods and estates, should be put on the same footing on which they were before the commencement of the reformation. But as the gentry and nobility had already divided the church lands among them, it was thought inconvenient and indeed impossible, to make a restoration of these. The persons who chiefly promoted these measures were Gardiner bishop of Winchester and cardinal Pole, who was a kinsman of Henry VIII. but had been long in Italy, and was now returned from it. The latter was for tolerating the Protestants; but the former, perceiving that rigorous measures would be most agreeable to the king and queen, declared himself against it. Though he might not, however, appear in person at the head of the persecution, he assigned that office to Bonner bishop of London, a man of a very abandoned character. The bloody scene began by the execution of Hooper bishop of Gloucester, and Rogers, prebendary of St Paul's. These were quickly followed by others, of whom the principal were Abp. CRANMER, RIDLEY bishop of London, and LATIMER bishop of Worcester. See these articles.) These persecutions soon became odious to the whole nation, and the perpetrators wished to throw the blame upon others. They endeavoured to fasten the whole reproach upon Bonner; but that bishop retorted on the court. A bold step was now taken to introduce a court similar to the Spanish inquisition, that should be empowered to try heretics, and to condemn them by its own authority. But even this was thought a method too dilatory in the present exigence of affairs. A proclamation was issued against books of heresy, treason, and sedition, declaring, that whosoever had such books in his possession, and did not burn them without reading, should be taken as a rebel. This was attended with the execution of such numbers, that at last the magistrates, who had been instrumental in these cruelties, refused to give their assistance any longer. It was computed, that during this persecution, 277 persons suffered by fire, besides those punished by imprisonments, fines, and confiscations. Among those who suffered by fire were 1 archbishop, 4 bishops, 21 other clergymen, 8 lay gentlemen, 84 tradesmen, 100 husbandmen, 55 women, and 4 children. The only remarkable transaction which happened during this reign with regard to civil affairs was the loss of Calais, which had been in the possession of the English for upwards of 150 years. See CALAIS, N^o 1. This loss filled the whole kingdom with complaints, and the queen with grief. She was heard to say, that, were she dead, the name of Calais would be found engraved on her heart. She did not long survive these losses; but died in 1558, of a lingering illness, at a reign of 5 years 4 months and 11 days.

(41.) ENGLAND, HISTORY OF, UNDER Q. ELIZABETH. On the death of Mary, the prince Elizabeth succeeded without opposition. She was at Hatfield when news of her sister's death was brought her; upon which she hastened up to London, where she was received with great joy. This princess was well qualified for government. She had judgment sufficient to choose proper ministers, and authority enough to keep her subjects in awe. The restraints also, to which she had been subjected during her sister's reign, taught her so well to conceal her sentiments, that she had become a perfect mistress of dissimulation; which, though no commendable part of character, proved occasionally of great service to her government. She completed the reformation, and put the religion of England upon the plan which subsists at present. This was accomplished without the least difficulty; for the persecutions in Mary's reign had served only to make the whole nation an aversion for popery. In the time of Edward VI. the people had been compelled to embrace the Protestant religion, and fears induced them to conform; but now, of the whole nation were Protestants from conviction. The reformation was confirmed by act of parliament in 1559, and thus the establishment of England was changed four times in 32 years. While the queen and her counsellors were employed in settling the religious affairs of the nation, negotiations were likewise carried on for a peace between England and France; which was at length concluded on the following terms, viz. that France should restore Calais at the expiration of 8 years; that in case of failure, he should pay 200,000 crowns, and Elizabeth's title to Calais should remain; that for the payment of this sum he should find the security of 8 foreign merchants, natives of France; and until that security were given he should deliver 5 hostages. If during this interval Elizabeth should break the peace with France or Scotland, she should forfeit all her claims to Calais; but if Henry made war on Elizabeth, she should be obliged to restore the fortress immediately. This pacification was soon followed by an irreconcilable quarrel with Mary queen of Scotland; which was not extinguished but by the death of the Scottish princess; and that with circumstances of accumulated treachery, hypocrisy, and dissimulation, as have stamped an indelible disgrace on the memory of Elizabeth. See ARTICLES MARY and SCOTLAND. Elizabeth had at length got rid of her rival in 1587, began to make preparations for resisting the Spanish invasion. Hearing that Philip was secretly fitting out a navy to attack her, she sent Sir Francis Drake with a fleet to pillage his coasts and destroy his shipping. On this expedition he set sail with several ships furnished by the queen, and 26,000 of various sizes furnished him by the merchants of London in hopes of sharing the plunder. He learned that a Spanish fleet richly laden was lying at Cadiz in readiness to set sail for Lisbon; he directed his course towards the former, where he boldly attacked the enemy. Six days were obliged to take shelter under the cannon of the forts; he burned about 100 vessels laden with ammunition and naval stores; (See

DRAKE, No 3.) and destroyed a great ship belonging to the Marquis de Santa Croce. Thence setting sail for Cape St Vincent, he took by assault the castle situated on that promontory, with three other fortresses. Having next insulted Lisbon, he sailed to the Terceras, where after lying in wait for some time, he took a rich prize, and then returned to England; having by this short expedition taught the English to despise the huge and unwieldy ships of the enemy, and thus prepared them to act with more resolution against the formidable armament, that now threatened to invade them. But though the expedition of Sir Francis Drake had retarded the intended invasion of England for a twelvemonth, it had by no means induced Philip to abandon his design. During that interval he continued his preparations with the greatest assiduity, more especially as the invasion of England seemed to be a necessary preparative for regaining his authority over the Netherlands, the revolted provinces having been strongly supported by Elizabeth. The fleet prepared at this time was superior to any thing then existing in the world; and no doubt being entertained of its success, it was ostentatiously styled the *Invincible Armada*. The miserable issue of this expedition, and the total failure of all the mighty hopes of Philip, are related under the article ARMADA, § 2. The spirit and courage of the English were now excited to attempt invasions in their turn; which they executed in numerous descents on the Spanish coasts; though these were only temporary, and designed not for permanent conquest, but merely to harass the enemy. It would be endless to relate all the advantages obtained at sea, where the capture of every ship must have made a separate narrative. It is sufficient to observe, that the sea captains of that reign are still considered as the boldest and most enterprising set of men that England ever produced; and among these Raleigh, Howard, Drake, Cavendish, and Hawkins, are peculiarly celebrated. The English navy then began to take the lead, and has since continued irresistible in all parts of the ocean. Elizabeth continued to reign with great glory till 1603; but all her greatness could not prevent her from being extremely miserable before her death. She had caused her greatest favourite, and supposed lover, the earl of Essex, to be executed. See DEVEREUX, No 1. Though this execution could not be called unjust, the queen's affection (on being informed that he had thrown himself entirely on her clemency) returned to such a degree, that she thenceforth gave herself entirely over to despair. She refused food and sustenance; she continued silent and gloomy; sighs and groans were the only vent she gave to her despondence; and she lay for ten days and nights upon the carpet, leaning on cushions, which her maids brought her. Perhaps the faculties of her mind were impaired by long and violent exercise; perhaps she reflected with remorse on some past actions of her life, or perceived, but too strongly, the decays of nature, and the approach of her dissolution. She saw her courtiers remitting in their assiduity to her, in order to pay their court to James the apparent successor. Such a concurrence of causes was more than sufficient to destroy the remains of her constitution;

situation; and her end was now visibly seen to approach. Feeling a perpetual heat in her stomach, attended with an unquenchable thirst, she drank without ceasing, but refused the assistance of her physicians. Her distemper gaining ground, Cecil and the lord admiral desired to know her sentiments with regard to the succession. To this she replied, That as the crown of England had always been held by kings, it ought not to devolve upon any inferior character, but upon her immediate heir the king of Scotland. Being then advised by the Abp. of Canterbury to fix her thoughts upon God, she replied, that her thoughts did not in the least wander from him. Her voice soon after left her; she fell into a lethargic slumber, which continued some hours; and she expired gently without a groan, on the 24th March 1602-3, in the 70th year of her age, and 45th of her reign.

(42.) ENGLAND, HISTORY OF, UNTIL THE DEATH OF K. JAMES I. The kingdoms of Scotland and England thus fell under the dominion of one sovereign, by the accession of James VI. of Scotland to the throne of England. He derived his title from being the grandson of Margaret eldest daughter of Henry VII. and, on the failure of all the male line, his right as nearest heir became incontestable. Q. Elizabeth had recognized him for her successor; so that few sovereigns ever ascended a throne with more general approbation, or greater hopes of a peaceable and happy reign. These hopes, however, were soon blasted; and the history of this monarch's reign consists of little else than a detail of his disputes with his parliament. A minute account of these could afford little entertainment; but it is of importance to know their origin, as they were the primary causes of those succeeding events which make so conspicuous a figure in the history of Great Britain. In those barbarous ages which preceded this period, the human mind, enervated by superstition, and obscured by ignorance, seemed to have given up all pretensions to liberty, either religious or civil. Unlimited and uncontrouled despotism prevailed every where; and though England suffered less in this respect than almost any other nation, the many examples of arbitrary power exerted by her sovereigns, Q. Elizabeth herself not excepted, show that the English were very far from being then a free people. An incontestable proof of this, and an evidence how little restraint the people could then lay upon the authority of the sovereign, is, that the proceedings of parliament were accounted, even by the members, of so little consequence, that they did not keep any records of them. It was not till the year 1607, four years after the accession of James, that parliamentary journals began to be kept, on the motion of Sir Edwin Sandys, a member of great authority. The proceedings of the parliament being held of so little consequence, it is no wonder that the sessions were not regular, or that little attention was paid to the choice or continuance of the members. In the reign of Elizabeth, and her predecessors, the sessions of parliament did not continue above the 12th part so long as the vacations. It was then usual, after a parliament had been prolonged beyond one session, for the chancellor to exert a discretionary power of issuing new writs to supply

the place of any members whom he judged incapable of attending, either on account of their employment, sickness, or other impediment. No practice could be more dangerous to liberty than this, as it gave the chancellor, and consequently the sovereign, an opportunity of granting at pleasure the representatives of the nation: so little was liberty then understood, that the commons, of their own accord, without the smallest court influence, and contrary to some former votes of their own, confirmed the chancellor's power in this respect, in the 23d of Elizabeth. Nor did they proceed any farther in the assertion of their privileges, than to vote, that "during the sitting of parliament there do not, at any time any writ go out for the choosing or returning a member without the warrant of the house." Towards the end of the 16th or beginning of the 17th century, a great revolution took place inestible throughout all Europe. Arts and sciences began to flourish, commerce and navigation were greatly extended, and learning of all kinds began to diffuse itself. By more enlarged views, the love of freedom began in Britain especially, to take place in the breasts of most people of education and this was greatly promoted by an acquaintance with the ancient Greek and Latin historians. From the examples of the republics of Greece and Rome, whose members had so often sacrificed their lives for the sake of liberty, a patriotic spirit began to arise; and a desire of circumscribing the excessive prerogatives and arbitrary proceedings of the crown began secretly to take place throughout the nation. Nor was this desire unreasonable, or without a just foundation. During the last years of queen Elizabeth's reign, the commerce, navigation, and number of seamen in England, had sensibly decayed. A remonstrance from the Trinity House in 1602 says, that since 1544 the number of seamen and shipping had decreased about a third part. Every species of domestic industry was fettered by monopolies; and by exclusive companies, almost all foreign trade, except that to France, was brought into the hands of a few rapacious engrossers; and all prospect of future improvement in commerce was sacrificed to a little temporary advantage of the sovereign. These companies, arbitrarily created, had carried their privileges so far, that almost all the commerce of England centered in London; the customs of that port alone amounted to 110,000*l.* a year; while those of all the rest of the kingdom amounted only to 17,000*l.* nay, the whole trade of London was confined to about 100 citizens, who were easily enabled, by combining among themselves, to fix whatever price they pleased both on the exports and imports of the nation. The subjects were also burdened by wanton and purveyances. The latter was an old prerogative of the crown, by which the officers of a household were empowered to take, without consent of the owners, provisions for the king's family, and carts and horses for the removal of baggage, upon paying a stated price for them. The king had also a power of sending any person without his consent, on whatever message he pleased; and thus he could easily force any individual to pay him whatever money he chose, rather than

out of the country on a disagreeable errand. Money extorted from individuals, by this or any other method, was called a *benevolence*. There were some of the grievances under which the nation at this time laboured, and these the good spirit of patriotism tended to redress. This objection, however, the severe government of James had confined within very narrow bounds; but when James succeeded, being a favourite prince, less dreaded and less beloved, sympathy for a more free and independent genius immediately appeared. Happily James neither perceived the alteration, nor had sufficient capacity to check its early advances. He had established his own mind a speculative system of absolute government, which few of his subjects, and none of his traitors and rebels, he thought, would make scruple to admit. He considered himself as entitled to equal prerogatives with other European monarchs, not considering the military force with which their despotism was supported. The almost unlimited power which, for upwards of a century, had been exercised by the English sovereigns, was considered as due to royal birth and title, not to prudence and spirit of those monarchs, or to the conjunctures of the times. In his person, James, more, he imagined all legal power to be centred by an hereditary and a *divine* right; nay, so he was persuaded, that he was the absolute proprietor of his subjects, that in his speech to parliament in 1611, he told them, that he shed them to have said, that their privileges were derived from the grace and permission of God and his ancestors." And when the same parliament protested that "the liberties, franchises, privileges, and jurisdictions of parliament, are the most ancient and undoubted birthright and inheritance of the subjects of England," he was so enraged, sending for the journals of the commons, he, by his own hand, before the council, tore out the protestation; and ordered his reasons to be entered in the council book. Such were the dispositions of the prince and parliament, at the commencement of the Scottish line; dispositions just beginning to exist and to appear in parliament, but thoroughly established, and openly avowed on the part of the king, throughout his reign. The consequence was, that during James's reign the prerogatives of the crown were violently and openly attacked; but the chief grounds of content were money and religion. The high notions of the royal prerogative made James imagine he had a right to whatever sums he pleased to demand; and his profusion dissipated at one time the scanty supplies he could extort from parliament, who seem to have behaved reasonably on the one hand, as James himself was on the other. With regard to religion, the nation was at that time greatly inclined to puritanism. Though the severities of James had almost totally suppressed the Papists, they had been otherwise with the Puritans. So much did they increase by the very means which James diminished the number of Catholics, that no less than 750 clergymen of that persuasion signed a petition to James on his accession. They hoped to gain the king, having received his education in England, and having always professed an attach-

ment to the church established there, would at least abate the rigour of the laws enacted against the Puritans, if he did not show them particular favour and encouragement. But in this they were mistaken. He had observed in their Scots brethren a violent turn toward republicanism, and a zealous attachment to civil liberty. In the capacities both of monarch and theologian, he had experienced the little complaisance they were disposed to show him. They controuled his commands; disputed his tenets; and to his face, before the whole people, censured his conduct and behaviour. This superiority assumed by the presbyterian clergy, the monarchic pride of James could never digest. Though he had been obliged while in Scotland to court their favour, he treasured up on that account the stronger resentment against them; and was determined to make them feel in their turn the weight of his authority. He therefore not only rejected the petition, but throughout his whole reign refused to relax in the least the severity of the laws against Protestant nonconformists, though very often petitioned in their favour by his parliament. The same principles which occasioned in James such an aversion to the Puritans, prompted him greatly to favour the episcopals, and even the Papists, as being greater friends to despotism. In his youth he had been suspected of a bias towards the religion of the latter; when he ascended the throne of England, it is certain he often endeavoured to procure some mitigation of the laws against them. But in this he was constantly opposed by the parliament; and indeed the strong inclination shown by James, to establish episcopacy throughout every corner of his dominions, tended very much to alienate the minds of the generality of his subjects, especially in Scotland. In May 1617, the king set out for Scotland, expressly with the design of establishing episcopacy in that kingdom. He did not, however, propose to abolish presbytery entirely, and set up absolute episcopacy in its room. He designed to content himself with establishing the royal authority above the ecclesiastical, and introducing some ceremonies into the public worship, such as kneeling at the sacrament, private communion, private baptism, confirmation of children, and the observance of Christmas, &c. But as his design was fully seen from the beginning, every advance towards episcopacy gave the greatest discontent, and those trivial ceremonies were rejected as so many mortal sins. At this time the power of the Scots clergy was very great; and they exercised it in such a manner, as to make their tyranny insupportable to those of a different way of thinking. Every ecclesiastical court possessed the power of excommunication; which was then attended with some very serious temporal consequences, besides the spiritual ones which were supposed to flow from it. The person excommunicated was shunned by every one as profane and impious: his whole estate during his life time, and all his moveables for ever, were forfeited to the crown. A sentence of excommunication was sometimes pronounced in a summary manner, by any ecclesiastical court however inferior; and against any person whether he lived within the bounds of their jurisdiction or not. But the clergy.

clergymen were not satisfied with this unbounded authority in ecclesiastical matters; they assumed a censorial power over every part of administration; and in all their sermons and even prayers, mingling politics with religion, they inculcated the most seditious and turbulent principles. One Black, a minister of St Andrew's, went so far as to pronounce in one of his sermons, that all kings were the devil's children; and in his prayer for the queen he used these words, "We must pray for her for the fashion's sake, but we have no cause: she will never do us any good." Another minister preaching in the principal church of the capital, said, that the king was possessed with a devil; and that, one devil being expelled, seven worse had entered in his place. To which he added, that the subjects might lawfully rise, and take the sword out of the hands of their sovereign. We cannot wonder that James should have been desirous of fubjugating such rebellious and turbulent spirits as these; and, on the other hand, considering the extreme weakness of this monarch's understanding, and that he imagined himself able to manage not only furious religionists, but even the most powerful foreign nations, with no other weapon than mere argumentation, we can as little wonder at his want of success.—In short, so far was James from being able to establish his royal authority above the ecclesiastical, that he found himself unable to introduce a single ceremony. He returned therefore with the mortification, not only of seeing his schemes entirely baffled with regard to Scotland, but of having disgusted even the few of that nation over whom religious prejudices did not prevail: for they, considering the ceremonies so much insisted on by the king as trivial and insignificant, could not help thinking the national honour sacrificed by a servile imitation of the modes of worship practised in England, and that their sovereign betrayed equal narrowness of mind, though in an opposite manner, with those he had so much condemned. Equally bad success attended James when he attempted some opposition to the puritanical innovations in England. He had observed in his progress through that kingdom, that a Judaical observance of the Sunday gained ground every day; and that the people were thus debarred from such recreations as contributed to their health as well as amusement. Imagining, therefore, that it would be easy to excite cheerfulness, instead of the gloomy spirit of devotion which then prevailed, he issued a proclamation to allow, after divine service, all kinds of lawful games and exercises. But this proclamation his subjects considered as an instance of the utmost prophaneness and impiety. In 1620, a bill was brought in by the Commons for the more strict observance of the Sunday, which they affected to call the *Sabbath*. One Shepherd opposed this bill, objected to the appellation of *Sabbath* as puritanical, and even justified sports on that day. For this he was expelled the house by the suggestion of Mr Pym; and in the sentence pronounced against Shepherd, his offence is said to be *great, exorbitant, and unparalleled*. Such was the situation of affairs during the reign of James I. We shall now give an account of the most remarkable transactions which occurred in this period. The first

thing of any consequence was a conspiracy formed, the very year of the king's accession to the throne, to displace him, and bestow the kingdom on Arabella Stuart, a near relation of James's, and equally descended from Henry VII. With regard to this conspiracy, every thing remains still as mysterious, as it was when the conspiracy was first discovered. Sir Walter Raleigh was said to have been concerned in it; for which he was tried, condemned without sufficient proof, suffered 13 years imprisonment in the tower, and was afterwards executed out of complaisance to the Spaniards. Lord Gardenshire remarks, that "James I. *butchered* Sir Walter without the form of a trial," and censures Mr Hume for attempting to vindicate James. See **RALEIGH**. In 1605 was discovered the famous **GUN-POWDER PLOT**, the anniversary of which discovery has ever been celebrated with rejoicings. Its origin was as follows: On the accession of James, great expectations had been formed by the catholics, that it would prove favourable to their religion. He had been suspected of a bias towards it in his youth, and it is even pretended, that he had entered into engagements to grant them a toleration, as soon as he should mount the throne of England. But however, their hopes were disappointed. James expressed his intention of executing strictly the laws against them, and of persevering in all the rigorous measures of queen Elizabeth. A plot of revenge was first thought of by Robert Catesby, gentleman of good parts, and of an ancient family. He communicated his mind to Thomas Percy, descendant of the house of Northumberland. He latter proposed to assassinate the king; but seemed to Catesby very inadequate to their purpose. He told Percy, that the king would succeed by his children, who would also inherit his maxims of government. He told him, that even though the whole royal family were destroyed, the parliament, nobility, and gentry, who were infected with the same heresy, would raise up the Protestant prince to the throne. "To do any good purpose (says he), we must destroy, in one blow, the king, the royal family, the law, and commons; and bury all our enemies in a common ruin. Happily they are all assembled at the first meeting of parliament; and afford an opportunity of glorious and useful vengeance. Great preparations will not be requisite. A few us may run a mine below the hall in which they meet; and choosing the very moment when the king harangues both the houses, consign over to destruction those determined foes to all piety and religion. Meanwhile, we ourselves standing in a safe, and unsuspected, shall triumph in being instruments of divine wrath, and shall behold with pleasure those sacrilegious walls, in which we passed the edicts for proscribing our church, and butchering her children, tossed into a thousand fragments; while their impious inhabitants, dictating perhaps still new persecutions against us, pass from flames above to flames below, there ever to endure the torments due to their offences. This terrible scheme being approved of, it was solved to communicate it to a few more. Thomas Winter was sent over to Flanders in quest of Fawkes, an officer in the Spanish service of

proved zeal and courage. All the conspirators were bound by the most solemn oaths, accompanied with the sacrament; and so completely had superstition effaced every principle of humanity from their minds, that not one of them ever entertained the smallest compunction for the cruel massacre they intended to commit. Some indeed were startled at the thoughts of destroying a number of Catholics, who must necessarily be present as spectators, or attendants on the king, or as having seats in the house of peers. But Telfond a Jesuit, and Garnet superior of that order in England, removed these scruples, by showing that the interest of religion required in this case the sacrifice of the innocent with the guilty. This happened in the spring and summer of 1604; when the conspirators hired a house in Percy's name, adjoining to that in which the parliament was to assemble. Towards the end of that year they began to pierce through the wall of the house, in order to get in below that where the parliament was to sit. The wall was three yards thick, and consequently occasioned a great deal of labour. At length, however, they approached the other side, but were then startled by a noise for which they could not well account. Upon inquiry, they found that it came from a vault below the house of lords; that a magazine of coals had been kept there; and that the coals were then selling off, after which the vault would be let to the highest bidder. Upon this the vault was immediately fired by Percy; 36 barrels of powder lodged in it; he whole covered up with faggots and billets; the doors of the cellar boldly flung open; and every body admitted as if it contained nothing dangerous. Being now, as they thought, assured of success, the conspirators began to plan the remaining part of their enterprize. The king, the queen, and prince Henry, were expected to be present at the opening of the parliament. The duke of Albany, by reason of his tender age, would be absent, and it was resolved that Percy should seize and murder him. The princess Elizabeth, likewise child, was kept at lord Harrington's house in Warwickshire; and some others of the conspirators engaged to assemble their friends on pretence of a hunting match, when they were to seize that princess, and immediately proclaim her queen. The day so long wished for at last approached; the dreadful secret, though communicated to more than 30 persons, had been religiously kept for near an ear and a half; and nothing could be foreseen which could possibly prevent the success of their design. Ten days before the meeting of parliament, however, lord Montague, a catholic, son of lord Morley, received the following letter, which had been delivered to his servant by an unknown hand:—"My lord, out of the love I bear to some of your friends, I have a care for your preservation. Therefore I would advise you, to tender your life, to devise some excuse to excuse off your attendance on this parliament. For I and many have determined to punish the wickedness of the times. And think not slightly his advertisement; but retire yourself into the country, where you may expect the event in safety. For though there be no appearance of any

stir, yet I say, they will receive a terrible blow to this parliament; and yet they shall not see who hurts them. This counsel is not to be contemned, because it may do you good, and can do you no harm; for the danger is over as soon as you have burned this letter. And I hope God will give you the grace to make use of it, to whose holy protection I commend you." Though Montague imagined this letter to be only a ridiculous artifice to frighten him, he carried it to lord Salisbury, secretary of state; who laid it before the king on his arrival in town a few days after. The king looked upon the letter in a more serious light. From the manner in which it was wrote, he concluded that some design was forming, to blow up the parliament house with gunpowder, and it was thought advisable to search the vaults below. The lord chamberlain, to whom this charge belonged, purposely delayed the search till the day before the meeting of parliament. He remarked those great piles of wood and faggots which lay in the vault under the upper house; and casting his eye upon Fawkes, who stood in a corner and passed for Percy's servant, he took notice of that daring and determined courage, which was conspicuous in his face, and so much distinguished this conspirator, even amongst the other heroes in villainy that were concerned in the scheme. Such a quantity of fuel, also, for one who lived so little in the town as Percy, appeared somewhat extraordinary; and, upon comparing all circumstances, it was resolved to make a further search. About midnight, Sir Thomas Knevit, a justice of peace, was sent with proper attendants; and before the door of the vault, finding Fawkes, who had just finished all his preparations, he immediately seized him, and, turning over the faggots, discovered the powder. The matches and every thing proper for setting fire to the train were taken in Fawkes's pocket; who seeing now no refuge but in boldness and despair, expressed the utmost regret, that he had lost the opportunity of firing the powder at once, and of sweetening his own death by that of his enemies. For two or three days he displayed the same obstinacy, but, being confined in the tower, and the rack shown to him, his courage failed, and he made a full discovery of all the conspirators. Catesby, Percy, and the other criminals, on hearing that Fawkes was arrested, hurried away to Warwickshire; where Sir Edward Digby, imagining that his confederates had succeeded, was already in arms to seize the princess Elizabeth. The country people were raised from all quarters, and armed by the sheriffs. The conspirators, with all their attendants, never exceeded the number of 80, and being surrounded on every side, could no longer have any hope either of prevailing or escaping. They therefore resolved to sell their lives as dear as possible. But even this miserable consolation was denied them. Some of their powder took fire, and disabled them from defending themselves. The people then rushed in upon them. Percy and Catesby were killed with one shot. Digby, Rookwood, Winter, and others, being taken prisoners, were tried, confessed their guilt, and died as well as Garnet, by the hands of the common executioner. The lords

Stourton and Mordaunt, two catholics, were fined, the former of L.4000, the latter of L.10,000, by the star chamber; because their absence from parliament had occasioned a suspicion of their being acquainted with the conspiracy. The earl of Northumberland was fined L.30,000, and detained several years a prisoner in the tower; because, among other grounds of suspicion, he had admitted Percy into the number of gentlemen pensioners, without his taking the requisite oaths. In 1612, James appears in his most advantageous point of view, namely, as legislator of Ireland, endeavouring to civilize the barbarous inhabitants of that kingdom, and to render their subjection durable and useful to the crown of England. In this work, James proceeded by a steady, regular, and well-concerted plan. He began with abolishing the ancient Irish customs, which supplied the place of laws, and which were exceedingly barbarous and absurd. By the Brehon laws, every crime however enormous was punished, not with death, but by a fine. See BREHON and BREHONICÆ LEGES. Murder itself was compensated in this way. Every one had a value affixed to him, called his *eric*; and whoever was able to pay this, might kill him when he pleased. As for such slight offences as oppression, extortion, &c. no penalty was affixed to them, nor could any redress for them ever be obtained. By the custom of GAVELKIND, upon the death of any person, his land was divided among all the males of the sept or family, both bastard and legitimate; and after partition made, if any of the sept died, his portion was not shared out among his sons; but the chieftain at his discretion made a new partition of all the lands belonging to that sept, and gave every one his share. As no man, by this custom, enjoyed the fixed property of any land; to build, cultivate, or improve, must have been so much lost labour. Their chieftains were established by election, or rather by force. Their authority was absolute; and, notwithstanding certain lands were assigned to the office, its chief profit resulted from exaction and assessments, for which there was no fixed law, and which were levied at pleasure. After abolishing these customs, and substituting English law in their place; James took the natives under his protection, declared them free citizens, and proceeded to govern them by a regular administration. A sufficient army was maintained, its discipline inspected, and its pay transmitted from England; to prevent the soldiers from preying upon the country, as had been usual in former reigns. When O'Doghartie raised an insurrection, a reinforcement was sent over, and the rebellion immediately extinguished. All minds being first quieted by an universal indemnity, circuits were established, justice administered, and crimes of every kind severely punished. As the Irish had been universally engaged in a rebellion against Elizabeth, a resignation of all the rights formerly granted them to separate jurisdictions was rigorously exacted; a resignation of private estates was even required; and when they were restored, the proprietors received them under such conditions, as might prevent all future tyranny and oppression over the inferior ranks. The whole province of Ulster having fallen to the crown by the attain-

der of rebels, a company was established in London for planting new colonies in that fertile country. The property was divided into moderate shares, the largest not exceeding 2000 acres: Tenants were brought over from England and Scotland: The Irish were removed from the hills, and settled in the open country: Husbandry and the arts were taught them; and thus, Ulster, from being the most wild and disorderly province in Ireland, soon became the best cultivated and most civilized. This year, Henry Prince of Wales, died suddenly on the 6th November, not without strong suspicions of poison. On opening his body, however, no symptoms of poison appeared; but his death diffused an universal grief throughout the nation, as he was reckoned a prince of extraordinary accomplishments. See HENRY, N. II. The marriage of the princess Elizabeth with Frederic elector palatine, which was celebrated February 14th, 1613, served to dissipate the grief which had arisen on account of prince Henry's death. But this marriage, in the event, proved unhappy to the king, as well as to his son-in-law. The elector, trusting to so great an alliance, engaged in enterprizes beyond his strength; and James, not being able, and perhaps not willing, to assist him, lost entirely the affections of his people. These bad consequences did not begin to appear till 1619. At this time the states of Bohemia having taken arms against the emperor Matthias, in defence of the Protestant religion, continued their revolt against his successor Ferdinand II. and being alarmed at his mighty preparations against them, made an offer of their crown to the elector palatine. To this they were induced by the greatness of his connections, as being son-in-law to the king of England, and nephew to prince Maurice, whose authority in the United Provinces was almost absolute; and the young palatine, stimulated by ambition, without consulting either James or Maurice, whose opposition he feared, immediately accepted the offer, and marched all his forces into Bohemia, in support of his new subjects. The affairs of the new king soon drew to an unfortunate crisis. Frederic, being defeated in the great and decisive battle of Prague, fled with his family into Holland; and Spinola the Spanish general had invested the palatinate, where meeting with little resistance, except from one body of 2400 Englishmen, commanded by the brave Sir Horace Vere, in a little time reduced the whole principality. In 1621, the ban of the empire was published against the unfortunate elector, and the execution of it was committed to the duke of Bavaria. The upper palatinate was in a short time conquered by that prince; and measures were taken in the empire for bestowing on him the electoral dignity of which the palatine was despoiled. Frederic was now obliged to live with his numerous family, in poverty and distress, either in Holland, or at Sedan, with his uncle the duke of Bouillon; and the new conquests of the catholics throughout all Germany were attended with persecutions against the Protestants. At this time the religious zeal of the English was inflamed to the highest degree. The sufferings of their Protestant brethren in Germany, excited their sympathy and resentment, and the inactive spirit shewn

by James was loudly exclaimed against. But tho' James might have defended his pacific measures by very plausible arguments, it is certain that some of his motives were extremely ridiculous. Such was the opinion that he entertained of his own wisdom, that he imagined himself capable of dissuading hostile nations by dint of argument; and that the whole power of Austria, though not awed by the power of England, would submit to his arbitration, merely out of respect to his virtue and moderation. So much also was he wedded to his opinion concerning the prerogative of kings, that he imagined, wherever there was a contention between any sovereign and his subjects, the latter behaved always to be in the wrong; and for this reason, from the very first, he had denied his son-in-law the title of *king of Bohemia*, and forced him to be prayed for in the churches under that appellation. James was also on another account extremely averse to come to a rupture with Spain. He entertained an opinion, that any alliance below that of a king was unworthy a prince of Wales; and he never would allow any princesses at a daughter of France or Spain to be mentioned as a match for his son. This piece of pride, which really implied meanness, as if he could have received honour from any alliance, gave Spain an opportunity of managing this monarch in his most important concerns. With a view to engage him to a neutrality with regard to the succession of James, the eldest daughter of the king of Spain had been indirectly offered during the life of prince Henry. The bait, however, did not then take; James, in consequence of his alliance with the Dutch, marched 4000 men to the assistance of the Protestants, by which means the succession was secured to the Protestant line. In 1628, Gondomar the Spanish ambassador made offer of the king's 2d. daughter to prince Charles; and, as he might render the temptation irresistible to the necessities James, gave hopes of an immense fortune with the princess. Upon this match James had built great hopes, not only of relieving his own necessities, but of recovering the palatinate from his son-in-law; which last, he imagined, might be procured from the mere motive of friendship and personal attachment. This last step was equally disagreeable to the commons with the rest; and, joined to the other pieces of James's conduct, it blew into a flame the contention which had long subsisted between their sovereign and them. On the 14th Nov. 1621, they framed a remonstrance which they intended to carry to the king. They represented, that the enormous growth of the Austrian power threatened the liberties of Europe; that the progress of the Catholic religion in England bred the most melancholy apprehensions, lest it should again acquire an ascendancy in the kingdom; that the indulgence of his majesty towards the professors of that religion had enraged their insolence; that the uncontrolled requests made by the Austrian family in Germany raised mighty expectations in the English spirits; but above all, that the Spanish match elevated them so far as to hope for an entire toleration, if not a final re-establishment, of their religion. They therefore intreated his majesty, that he would immediately undertake the defence of

the palatinate; and maintain it by force of arms; that he would turn his sword against Spain, whose armies and treasures were the chief support of the Catholic interest in Europe; that he would enter into no negotiation for the marriage of his son but with a Protestant princess; that the children of Popish recusants should be taken from their parents, and committed to the care of Protestant teachers and schoolmasters; and that the fines and confiscations to which the Catholics by law were liable, should be levied with the utmost severity. The king, who was then at Newmarket, hearing of the intended remonstrance, wrote a letter to the speaker, in which he sharply rebuked the house for debating on matters far above their reach and capacity; and he strictly forbade them to meddle with any thing that regarded his government, or deep matters of state, and especially not to touch on his son's marriage with the Spanish princess. Upon this the commons framed a new remonstrance, in which they asserted their right of debating on all matters of government, and that they possessed entire freedom of speech in their debates. The king replied, that their remonstrance was more like a denunciation of war, than an address of dutiful subjects; that their pretension to inquire into all state affairs without exception, was such a presumption as none of their predecessors, even during the reigns of the weakest princes, had ever pretended to; that public transactions depended on a complication of views and intelligence, with which they were entirely unacquainted; that they could not better show their wisdom, as well as duty, than by keeping within their proper sphere; and that in any business which depended on his prerogative, they had no title to interpose with their advice, unless when he pleased to ask it, &c. The commons in return framed the protestation already mentioned, which the king tore out of their journals, and soon after dissolved the parliament. The leading members of the house, Sir Edward Coke and Sir Robert Phillips, were committed to the tower; three others, Seiden, Pym, and Mallory, to other prisons; and, as a lighter punishment, some others were sent into Ireland to execute the king's business. Sir John Saville, however, a powerful man in the house of commons, and a zealous opposer of the court, was made the comptroller of the household, a privy counsellor, and soon after a baron. This event is memorable, being the first instance in the English history, of any king advancing a man on account of parliamentary interest, and of opposition to his measures. This breach between the king and his parliament soon made politics become a general subject of discourse, and every man began to indulge himself in reasonings and inquiries concerning matters of state; and the factions which commenced in parliament were propagated throughout the nation. In vain did James, by reiterated proclamations, forbid discourses of this kind. These proclamations served rather to inflame the curiosity of the public. In every company and society, the late transactions became the subject of argument and debate; some taking the side of monarchy, others of liberty; and this was the origin of the two parties since known by the names of *Whigs* and *Tories*. For

five years, James continued the dupe of the court of Spain. Though resolved to contract no alliance with a heretic, the king of Spain had continued to procrastinate, while he pretended to be very willing to conclude the match. At last the king of England, finding out what was really the matter, resolved to remove that obstacle if possible. He issued public orders for discharging all popish recusants who were imprisoned; and it was daily apprehended that he would forbid, for the future, the execution of the penal laws against them. For this conduct he apologized by pretending, that it was done to procure from foreign princes a toleration for the Protestants; the severity of the English laws against catholics, he said, having been urged as a reason against showing any favour to Protestants residing in catholic kingdoms. These concessions in favour of the catholics, however ill relished by his subjects, at last obtained James's end with regard to the marriage. The earl of Bristol, ambassador at the court of Spain, a minister of vigilance and penetration, and who had formerly opposed the alliance with catholics, being now fully convinced of the Spanish sincerity, was ready to congratulate the king on the completion of his projects. The Spanish princess is represented as very accomplished; she was to bring with her a fortune of £ 600,000; and, what was more, not only Bristol considered this match as an infallible prognostic of the palatine's restoration, but the Spaniards themselves did the same. All things being therefore agreed upon between the parties, nothing was wanting but the dispensation from Rome, which might be considered as a matter of mere formality. The king exulted in his pacific counsels, and boasted of his superior sagacity and penetration; when all his flattering prospects were blasted by the temerity of the duke of Buckingham, who governed both court and nation with almost unlimited sway. This nobleman had suddenly been raised to the highest honours. Though possessed of some accomplishments of a courtier, he was devoid of every talent of a minister; but at once partook of the insolence which attends a fortune newly acquired, and the impetuosity which belongs to persons born in high stations, and unacquainted with opposition. Among those who had experienced the arrogance of this overgrown favourite, the prince of Wales himself had not been entirely spared; and a great coldness, if not enmity, had for that reason taken place between them. Buckingham being desirous of putting an end to this coldness, and at the same time envious of the great reputation of the earl of Bristol, persuaded the prince to undertake a journey to Madrid; which, he said, would be an unexpected piece of gallantry; would equal all the fictions of Spanish romance; and, suiting the amorous and enterprising character of that nation, must immediately introduce him to the princess, under the agreeable character of a devoted lover and daring adventurer. Little persuasion was necessary to prevail with Charles to undertake this journey; and the impetuosity of Buckingham having extorted a consent from James, our two adventurers set out, prince Charles as the knight-errant, and Buckingham as the squire. They travelled through France in disguise, assuming the

names of Jack and Tom Smith. They went to a ball at Paris, where the prince first saw the princess Henrietta whom he afterwards married, who was then in the bloom of youth and beauty, and with whom the novelists of that time say he fell in love. On their arrival at Madrid, every body was surprised by a step so little usual among great princes. The Spanish monarch made Charles a visit, expressed the utmost gratitude for the confidence he reposed in him, and made warm protestations of a correspondent confidence and friendship. He gave him a golden key which opened all his apartments, that the prince might, without any introduction, have access to him at all hours; he took the left hand of him on every occasion, except in the apartments assigned to Charles; for there, he said, the prince was at home; Charles was introduced into the palace with the same pomp and ceremony which attended the kings of Spain on their coronation: the council received public orders to obey him as the king himself; Olivarez too, the prime minister, though a grandee of Spain, who has the right of being covered before his own king, would not put on his hat in the prince's presence: all the prisoners of Spain were thrown open, and all the prisoners received their freedom, as if an event the most honourable and most fortunate had happened to the monarchy; and every sumptuary law with regard to apparel was suspended during prince Charles's residence in Spain. The infants, however, was only shown to her lover in public; the Spanish ideas of decency being so strict, as not to allow any farther intercourse till the arrival of the dispensation. The point of honour was carried so far by these generous people, that no attempt was made, on account of the advantage they had acquired by having the prince of Wales in their power, to impose any harder conditions of treaty: their pious zeal only prompted them on one occasion to desire more concessions in the religious articles; but on the opposition of Bristol, they immediately desisted. The Pope, however, hearing of Charles's arrival in Madrid, tackled some new clauses to the dispensation; and it became necessary to transmit the articles to London, that the king might ratify them. This treaty, which was made public, consisted of several articles chiefly regarding the exercise of the catholic religion by the infants; and, among these, nothing could reasonably be found fault with, except one article, in which the king promised that the children should be educated by the princess till they were ten years of age; which undoubtedly was insisted upon with a view of seasoning their minds with catholic principles. But, besides this public treaty, there were some private articles sworn to by James, which could not have been made public without grievous murmurs. A suspension of the penal laws against the English catholics was promised, as likewise a repeal of them in parliament, and a toleration for the exercise of that religion in private houses. Meanwhile Gregory XV. who granted the dispensation, died; and Urban VIII. was chosen in his place. Upon this event, the nuncio refused to deliver the dispensation till it should be renewed by Urban. This the crafty pontiff delayed, in hopes that, during the prince's residence

idence in Spain, some expedient might be fallen on to effect his conversion. The king of England, as well as the prince, became impatient : on the first hint, Charles obtained leave to turn ; and Philip graced his departure with all circumstances of civility and respect which attended his arrival. He even erected a pillar the spot where they took leave of each other, a monument of mutual friendship : and the ace, having sworn to the observance of all the icks, embarked on board the English fleet at Andero. The modest, reserved, and decent avour of Charles, together with his ungaral confidence in them, and the romantic gal-ly he had practised with regard to their prin-, had endeared him to the whole court of and. But in the same proportion that Charles beloved and esteemed, was Buckingham derd and hated. His sallies of passion ; his inde-freedom with the prince ; his dissolute plea-; his arrogant impetuous temper, which he ber could nor would disguise ; were to the ards the objects of peculiar aversion. They ed the infant's fate, who must be approach- y a man whose temerity seemed to respect no -divine or human. Buckingham, on the o -band, sensible how odious he was become to Spaniards, and dreading the influence which -nation would naturally acquire after the ar- of the infant, resolved to employ all his cre- in order to prevent the marriage. By what -ments he could prevail on the prince to offer -an insult to the Spanish nation, from whom -d received such generous treatment ; by what -he could disguise the ingratitude and im- -ence of such a measure ; these are totally un- -to us : certain it is, however, that when -nce left Madrid, he was firmly determined, -position to his most solemn promises, to -off the treaty with Spain. On their arrival -ndon, therefore, the prince and Buckingham -ced the entire direction of the negotiation ; -it was their business to seek for pretences by -h they could give a colour to their intended -h of treaty. At last, after many fruitless ar- -s were employed to delay or prevent the ef- -le, Bristol received positive orders not to de- -the proxy which had been left in his hands, -finish the marriage, till security was given -full restitution of the palatinate. Philip -stood this language : but being determined -row the whole blame of the rupture on the -ish, he delivered into Bristol's hand a written -ise, by which he bound himself to procure -estoration of the palatinate, either by persua- -or by every other possible means ; and when -und that this concession gave no satisfaction, -rdered the infant to lay aside the title of -esi of Wales, which she bore after the arrival -e dispensation from Rome, and to drop the - of the English language ; and as he knew -uch rash counsels as now governed the court -ngland would not stop at the breach of the -age treaty, he immediately ordered prepa- -s for war to be made throughout all his do- -ons. A match for prince Charles was soon -negotiated with Henrietta, daughter of the - Henry IV. and this met with much better

success than the former. However, the king had not the same allurements in prosecuting this match as the former, the portion promised him being much smaller ; but, willing that his son should not be altogether disappointed of a bride, as the king of France demanded only the same terms that had been offered to the court of Spain, James thought proper to comply. In an article of this treaty of marriage, it was stipulated, that the education of the children till the age of 13 should belong to the mother ; and this probably gave that turn towards popery, which has since proved the ruin of the unfortunate family of Stuart. James, being now deprived of every other hope of relieving his son-in-law but by force of arms, declared war against Spain and the emperor, for the recovery of the palatinate ; 6000 men were sent over into Holland to assist prince Maurice in his schemes against those powers ; the people were every where elated at the courage of their king, and were satisfied with any war which was to exterminate the Papists. This army was followed by another consisting of 12,000 men, commanded by count Mansfeldt ; and the court of France promised its assistance. But the English were disappointed in all their views : the troops being embarked at Dover, upon failing to Calais, found no orders for their admission. After waiting for some time, they were obliged to sail towards Zealand, where no proper measures were yet consulted for their disembarkation. Mean while, a pestilential disorder crept in among them, from being so long cooped up in narrow vessels : half the army died on board ; and the other half, weakened by sickness, appeared too small a body to march into the palatinate ; and thus ended this ill-concerted and fruitless expedition. Whether this misfortune had any effect on the king's constitution, is uncertain ; but he was soon after seized with a tertian ague, which put an end to his life on the 27th March, 1625, after having lived 59 years, and reigned over England 22, and over Scotland almost as long as he lived.

(43.) ENGLAND, HISTORY OF, UNTIL THE DISSOLUTION OF THE 3D PARLIAMENT UNDER K. CHARLES I. James was succeeded by his son Charles I, who ascended the throne amidst the highest praises and caresses of his subjects, for breaking off the match with the Spanish prince, and procuring the rupture with the house of Austria. Being young and unexperienced, he regarded these praises as sincere ; and therefore was so impatient to assemble the great council of the nation, that he would gladly, for the sake of dispatch, have called together the same parliament which sat under his father, and which lay at that time under prorogation. But being told that such a measure was unusual, he issued writs for summoning a new parliament on the 7th of May ; and it was not without regret that the arrival of the prince's Henrietta, whom he had espoused by proxy, obliged him to delay, by repeated prorogations, their meeting till the 18th of June, when they assembled at Westminster for the dispatch of business. Charles inherited from his father great distress for money, very high notions of the royal prerogative, and a violent attachment to episcopacy. As to his character, he seems to have been

obstinate, though not resolute; and therefore, though it was scarce ever possible to make him give up his point, he never could carry on his designs with that spirit which was necessary for their success. In other respects, he appears to have possessed many virtues. At his accession believing his subjects to be in perfect friendship with him as he was with them, he resolved that their bounty to him should be entirely unasked, and the genuine effect of mutual confidence and regard. Accordingly, his discourse to the parliament was full of simplicity and cordiality. He lightly mentioned the occasion he had for supply. He employed no intrigue to influence the suffrages of the members. He would not even allow the officers of the crown, who had seats in the house, to mention any particular sum which he had occasion for; but trusted entirely to the wisdom and affection of his parliament, who perfectly well knew his circumstances. The return made by the commons was by no means suitable to this generous behaviour of their sovereign. They knew that all the money granted by the last parliament had been spent on military and naval preparations; and that great anticipations were likewise made on the revenues of the crown. They were not ignorant, that Charles was loaded with a debt contracted by his father, who had borrowed money both from foreign princes, and from his own subjects. They had learned by experience, that the public revenues could with difficulty maintain the dignity of the crown, even under the ordinary charges of the government. They were sensible that the war was the result of their own importunate intreaties, and that they had solemnly engaged to support their sovereign in carrying it on. They were acquainted with the difficulty of military enterprises directed against the whole house of Austria; against the king of Spain, possessed of the greatest riches and most extensive dominions of any prince in Europe; against the emperor Ferdinand, hitherto the most fortunate monarch of the age, who had subdued and astonished Germany by the rapidity of his victories. Deep impressions they saw must be made by the British sword, and a vigorous offensive war be waged against these mighty potentates, ere they would resign the palatinate which they had now fully subdued, and which they held in secure possession by its being surrounded with all their other territories. To answer, therefore, all these great and important ends; to satisfy their young king in the first request he made them; to prove their sense of the many royal virtues, particularly economy, with which Charles was endued; the commons thought proper to confer on the king a supply of £.112,000. Charles could not be insensible of such treatment; he behaved, however, with great moderation. He represented in the most explicit manner the necessity there was for a large supply: he even condescended to use intreaties: he said that this request was the first he had ever made them; that he was young, and in the commencement of his reign; and if he now met with kind and dutiful usage, it would endear him to the use of parliaments, and would for ever preserve an entire harmony between him and his people.—To these reasons and intreaties, the commons remain-

ed inexorable; they even refused the addition of two 15ths to the former supply. Instead of this they renewed their complaints against the growth of popery; demanded a strict execution of the penal laws against the catholics; remonstrated against some late pardons granted to priests; attacked Montague, one of the king's chaplains on account of a moderate book which he had lately composed. Charles gave them a gracious and complaisant answer; but was firmly resolved to debate somewhat of the rigorous laws against the unfortunate party, which his engagements with France absolutely required. No measure could have been more disgustful to his bigotted subjects than this resolution. The Puritans had continued to gain ground during the whole reign of James; and now formed the majority of the house of commons; in consequence of which, petitions were presented to the king for replacing such of the clergymen as had been silenced for want of conformity to the ceremonies. They also made laws for the strict observance of Sunday, which they affected to call the *Sabbath*; and thus the different appellations of *Sunday* and *Sabbath* were taken as symbols of the different parties.—In consequence of this behaviour in Charles's first parliament was dissolved on the 18th Aug. 1635, and a new one called on Feb. 6, 1636. During this interval Charles had been obliged to borrow from his subjects privy seals; the advantage of which was but a small compensation for the disgust it occasioned. By means, however, of that supply, and some other expedients, he was enabled to equip his fleet though with difficulty. It was designed against Spain, but performed nothing worth notice, and its bad success increased the clamours against the court. Charles's 2d parliament adopted the same views with the former. They, however, voted a supply of three subsidies (£. 168,000) and the 15ths; but the passing this vote into a law was reserved until the end of the session, that the king might have an opportunity of forcing the commons to make concessions. This harsh and undutiful conduct was greatly resented by Charles; but he found himself obliged to submit. In the mean time he attacked the duke of Buckingham, who was become generally obnoxious; and was impeached by the earl of Bristol, on account of his conduct with respect to the Spanish negotiation. The earl's impeachment, however, was entirely overlooked, and the commons were able to prove nothing otherwise of any consequence against him. The king imagining that Buckingham's gross crime was the having been so much in favour of his sovereign, commanded the house expressly not to meddle with his minister, but to finish a few days the bill they had begun for the said dies; otherwise they must expect to sit no longer. Suggestions of this kind had a bad effect; when the king proceeded further to throw into prison two members of the house who had managed the impeachment against Buckingham, the commons declared that they would proceed no further till they had satisfaction in their privilege. Charles alleged as the reason of this measure, certain seditious expressions, which, he said, had been their accusation of the duke, dropped from their members. Upon inquiry it appeared that no such expression

preffions had been used, and the members were
 asked. Soon after, the house of lords, moved
 the example of the commons, claimed liberty
 the earl of Arundel, who had been lately con-
 ed in the tower, and after many fruitless eva-
 ns the king was obliged, however ungracefully,
 comply. The next attack made by the com-
 ns, had it succeeded, would have reduced the
 g to an absolute dependence on parliament.
 ey were preparing a remonstrance against the
 ying of tonnage and poundage without consent
 parliament. This article, together with the
 impositions laid on merchandize by James,
 dited near one half of the crown revenues ;
 after having gained this point, they were to
 ition the king, which then would have been
 same thing with commanding him, to remove
 e-ingham from his presence and councils. The
 s, however, being alarmed at the yoke they
 e preparing for him, dissolved this 2d parlia-
 nt, June 15, 1626. Charles having thus made
 a breach with his parliament as there was no
 es of repairing, was obliged to exercise every
 ch of his prerogative to supply himself with
 y. A commission was granted to compound
 the catholics, and agree for dispensing with
 penal laws enacted against them. By this ex-
 tent the king, indeed, filled his coffers, but
 general disgust. From the nobility he desired
 lance : from the city he required a loan of
 50,000. The former contributed slowly ; but
 later, after many excuses, gave at last a flat
 al. To equip a fleet, a distribution by order
 e council was made to all the maritime towns ;
 each of them was required, with the assistance
 e adjacent counties, to arm so many vessels.
 don was rated at 20 ships ; and this is the first
 carance, in Charles's reign, of ship-money ;
 ration which had once been imposed by Eli-
 zeth, but which, when carried some steps far-
 er by Charles, produced the most violent dis-
 contents. These methods of supply were carried
 with some moderation, till news arrived of
 king of Denmark being totally defeated by
 at Tilly the imperial general ; but money then
 coming more than ever necessary, it was sug-
 ged in council, that the most speedy, equal,
 convenient method of supply was by a gene-
 loan from the subject, according as every man
 assessed in the rolls of the last subsidy. That
 sic sum was required which each would have
 had the vote of four subsidies been passed
 a law : care, however, was taken, that the
 a thus exacted were not to be called subsidies
 loans ; but it was evident, that thus the liber-
 ty of the subject was entirely destroyed, and par-
 ents rendered quite superfluous. Many peo-
 throughout England refused these loans, and
 e were even active in encouraging their neigh-
 rs to insist upon their common rights and pri-
 ges. By warrant of the council, these were
 own into prison. Most of them patiently sub-
 mitted to confinement, or applied by petition to
 king, who commonly released them. Five
 lemen, however, Sir Thomas Darnel, Sir John
 bet, Sir Walter Earl, Sir John Haveringham,
 Sir Edward Hamden, demanded release, not
 favour from the court, but as their due by

the laws of their country. No particular cause
 was assigned for their commitment. The special
 command of the king and council alone was
 pleaded. And it was alleged, that by law this
 was not sufficient reason for refusing bail or re-
 lease to the prisoners. The question was
 brought to a solemn trial before the court of
 King's Bench ; and the whole kingdom was at-
 tentive to the issue. By the debates on this sub-
 ject it appeared, that personal liberty had been
 secured by no less than six different statutes, and
 by an article in magna charta itself. It appeared,
 that, in times of turbulence and sedition, the kings
 had infringed upon these laws ; and of this also
 many examples were produced. The difficulty
 then lay to determine when such violent measures
 were necessary ; but of that the court pretended
 to be the supreme judge. As it was legal, there-
 fore, that these five gentlemen should plead the
 statute, by which they might demand bail, so it
 was expedient in the court to remand them to
 prison, without determining on the necessity of
 taking bail for the present. This was a cruel e-
 vasion of justice ; and in fact, satisfied neither par-
 ty. The court insisted that no bail could be ta-
 ken ; the country exclaimed that the prisoners
 ought to be set free. While the king was thus em-
 broiled with his parliament at home, and with
 powerful nations abroad, he rashly engaged in a
 war with France, a kingdom with which he had
 but lately formed the most natural alliance. All
 historians agree that this war proceeded from the
 rivalry of the duke of Buckingham and cardinal
 Richelieu ; both of whom were in love with the
 queen of France ; and an inveterate enmity being
 thus produced between these favourites, they re-
 solved to involve their respective nations in the
 dispute. However this be, war was declared a-
 gainst France ; and Charles was taught to hope,
 that hostilities with that kingdom would be the
 surest means of procuring tranquillity at home.—
 The success of this war was proportionable to the
 wisdom with which it was commenced. Buck-
 ingham was appointed commander ; and he be-
 ing entirely unacquainted both with sea and land
 service, managed matters so ill, that he lost two
 thirds of his army, and returned in total discredit
 both as an admiral and general. The discontents
 in England now rose to such an height, that there
 was reason to apprehend an insurrection or rebel-
 lion. Charles was also reduced to the greatest
 distress for want of money. That which he had
 levied by virtue of his prerogative came in very
 slowly, and it was dangerous to renew the expe-
 riment, on account of the ill humour of the na-
 tion in general. A 3d parliament therefore was
 called, March 17th, 1628 ; whom Charles plainly
 told at the beginning of the session, that " if they
 should not do their duties, in contributing to the
 necessities of the state, he must, in discharge of
 his conscience, use those other means which God
 had put into his hands, in order to save that which
 the follies of some particular men might otherwise
 put in danger." This parliament behaved in a
 much more reasonable manner than either of the
 two former ones. The nation was now really ag-
 grieved by the late arbitrary proceedings. They
 began with voting against arbitrary imprisonment

and forced loans; after which, five subsidies (L. 280,000) were voted to the king. With this sum, though much inferior to his wants, Charles declared himself well satisfied; and even tears of affection started in his eye when informed of this concession: the commons, however, resolved not to pass this vote into a law, before they had obtained from the king a sufficient security, that their liberties should be no longer violated, as they had formerly been. They resolved to frame a law, which they were to call a *petition of right*, in which they should collect all the arbitrary exertions of the prerogative which Charles had exposed to their view, and these they were to assault at once by their petition. The grievances now complained of were forced loans, benevolences, taxes without consent of parliament, arbitrary imprisonments, billeting soldiers, and martial law. They pretended not to any unusual power or privileges; nor did they intend to infringe the royal prerogative in any respect: they aimed only at securing those rights and privileges derived from their ancestors. The king, on his part, now began plainly to show, that he aimed at nothing less than absolute power. This reasonable petition he did his utmost to evade; by repeated messages to the house, in which he always offered his royal word, that there should be no more infringements on the liberty of the subject. These messages, however, had no effect on the commons: they knew how insufficient such promises were, without further security; and therefore the petition at last passed both houses, and nothing was wanting but the royal assent to give it the force of a law. The king accordingly came to the house of peers, sent for the commons, and being seated in the chair of state, the petition was read to him. In answer to it, he said, "The king willeth, that right be done according to the laws and customs of the realm, and that the statutes be put into execution; that his subjects may have no cause to complain of any wrong or oppression contrary to their just rights and liberties, to the preservation whereof he holds himself in conscience as much obliged as of his own prerogative." This equivocal answer was highly resented. The commons returned in very ill humour. Their indignation would undoubtedly have fallen on the catholics, had not their petition against them already received a satisfactory answer. To give vent to their wrath, therefore, they fell on Dr Manwaring, who had preached a sermon, and, at the special command of the king, printed it; which was now found to contain doctrines subversive of all civil liberty. It taught, that though property was commonly lodged in the subject, yet, whenever any exigency required supply, all property was transferred to the sovereign; that the consent of parliament was not necessary for the imposition of taxes; and that the divine laws required compliance with every demand, however irregular, which the prince should make upon his subjects. For these doctrines Manwaring was sentenced to be imprisoned during the pleasure of the house; to be fined L. 1000 to the king; make submission and acknowledgment for his offence; be suspended 3 years; be incapable of holding any ecclesiastical dignity or secular office; and that his book be

called in and burnt. No sooner, however, was the session ended, than Manwaring received a pardon, and was promoted to a living of considerable value. Some years afterwards he was promoted to the see of St Asaph. At last, the king seeing it was impossible to carry his point, yielded to the importunities of parliament. He came to the house of peers, and pronouncing the same form of words, "Let it be law as is desired," gave full sanction and authority to the petition. The house resounded with acclamations, and a bill for five subsidies immediately passed. The commons, however, were not yet satisfied; they began to attack Buckingham, against whom they were implacable: they also asserted, that levying of tonnage and poundage without consent of parliament was a palpable violation of ancient liberties of the people, and an open infringement of the petition of right so lately granted. The king, to prevent a remonstrance on that subject, suddenly prorogued the parliament, on July 26th, 1528. The commons soon got rid of their enemy Buckingham; who was murdered on the 23d of August following, by one Felton who formerly served under him as a lieutenant. The king did not appear much concerned at his death, but retained an affection for his family throughout his whole life. He desired, also, that he might be tortured, in order to extort from him the discovery of his accomplices; but the judges properly declared, that though that practice had been formerly common, it was altogether illegal. In 1629, the contentions between the king and his parliament continued. The great strife, which the commons broke with their former parliaments, was their claims with regard to tonnage and poundage. The dispute was, whether this tax could be levied without consent of parliament or not. Charles, supported by many of precedents, maintained that it might; and parliament, in consequence of their petition, asserted that it could not. The commons were resolved to support their rights; and the disputes concerning tonnage and poundage went hand in hand with some theological controversies, particularly concerning Arminianism, which the Puritans, who now formed the majority of the nation, opposed with the greatest violence, which consequently crept in among their professed episcopacy, where it still maintains ground more than in any other party. The commons began with summoning before them the officers of the custom-house, to give an account of what authority they had seized the goods of the merchants, who had refused to pay the duties of tonnage and poundage. The barons of exchequer were questioned with regard to their decrees on that head. The sheriff of London was committed to the Tower for supporting the officers of the custom-house. The goods of Rolles, a merchant and member of the house, being seized for his refusal to pay the duties, complaints were made of this violence, as a flagrant breach of privilege. Charles, on the other hand, supported his officers in all these measures, and the quarrel between him and the commons became every day more bitter. Sir John Elliot framed a remonstrance against

age and portndage, which he offered to the clerk to read; but it was refused, and he then ad it himself. The question being called for, John Finch the speaker said, that he had a command from the king to adjourn, and to put the question; upon which he rose and left the air. The whole house was in an uproar; the speaker was pushed back into the chair, and forcibly held in it, till a short remonstrance was made, which was instantaneously passed by almost universal acclamation. Papists and Arminians were now declared capital enemies to the commonwealth. Those who levied tonnage and poundage were branded with the same epithet, even the merchants, who should voluntarily perform these duties, were called betrayers of English liberty, and public enemies. The doors were locked, the gentleman-usher of the house of lords, who was sent by the king, could get admittance till this remonstrance was finished. The king's order he took the mace from the clerk, which put an end to their proceedings, and the 10th of March the parliament was dissolved.

Some of the members were imprisoned and; but this severity served only to increase the mutual discontent, and point out the sufferers as leaders for the popular party.

4) ENGLAND, HISTORY OF, UNTIL THE MEETING OF THE LONG PARLIAMENT. Charles, being now disgusted with parliaments, refused to call no more; but finding himself destitute of resources, was obliged to make peace with the two powers with whom he was at war. A treaty was signed with France on the 14th August, and another with Spain on the 5th November, by which Charles bound himself to observe neutrality with regard to the affairs on the continent. His conduct to his subjects cannot now be blamed, nor the general discontent without foundation. As if, however, he had resolved on himself, and to lose the small degrees of freedom which remained among his subjects, he now began to make innovations in religion.

Abp. Laud had obtained a prodigious ascendancy over the king; and, by his superstitious sentiment to foolish ceremonies, led him into a course that proved fatal to himself and to the nation in general. The humour of the nation at that time in a channel perfectly the reverse of criticism. The ancient ceremonies which were sanctified by the practice of the first reformed church, could scarce be retained in divine service. Charles chose this time, of all others the most improper, for renewing the ceremonies of the 4th and 5th centuries, when the Christian church was devoted to those superstitions, which were afterwards greatly augmented by the policy of the popes of Rome. So openly were these tenets avowed, that not only the discontented Puritans, but the church of England to be relapsing fast into the Romish superstition, but the court of itself entertained hopes of regaining its authority in this island; and actually offered Laud the mitre. See LAUD. It must be confessed, that though Laud deserved not the appellation of a *Papist*, the genius of his religion was, in a less degree, the same with that of the popes. The same profound respect was exacted

VIII. PART II.

to the sacerdotal character; the same submission to the creeds and decrees of synods and councils required; the same pomp and ceremony was affected in worship; and the same superstitious regard to days, postures, meats, and vestments. Orders were given, and rigorously insisted on, that the communion table should be removed from the middle of the area where it had hitherto stood in all churches except cathedrals. It was placed at the east end, railed in, and denominated an *altar*; as the clergyman who officiated commonly received the appellation of *priest*. All kinds of ornaments, especially pictures, were introduced. Some of these, upon inquiry, were found to be the very same that were to be met with in the mass book. The crucifix too, that perpetual consolation of all pious Catholics, and terror to all sound Protestants, was not omitted. In return for Charles's indulgence towards the church, Laud and his followers took care to magnify on every occasion the regal authority, and to treat with the utmost disdain all puritanical pretensions to a free and independent constitution. From this subjection, however, they took care to exempt themselves, and insisted upon a divine and apostolical charter in preference to a legal and parliamentary one. The sacerdotal character was magnified as sacred and indefeasible; all right to spiritual authority, or even to private judgment in spiritual subjects, was refused to profane laymen: ecclesiastical courts were held by bishops in their own name, without any notice taken of the king's authority: and Charles, though extremely jealous of every claim in popular assemblies, seemed rather to encourage than repress those encroachments of his clergy. The principles which exalted prerogative were put in practice during the whole time that Charles ruled without parliaments: He wanted money for the support of government; and he levied it, either by the revival of obsolete laws, or by violations of privileges. Though humane and gentle in his nature, he gave way to severities in the star-chamber and high commission, to suppress the rising spirit of liberty throughout the kingdom. Tonnage and poundage were continued to be levied by royal authority alone. The former arbitrary impositions were still exacted, and new impositions laid upon different kinds of merchandize. The custom-house officers received orders from the council to enter into any house, warehouse, or cellar; to search any trunk or chest; and to break any bulk whatever, in default of the payment of customs. In order to exercise the militia, each county by an edict of the council was assessed in a certain sum for maintaining a mustered master appointed for that service. Compositions were openly made with recusants, and the Popish religion afforded a regular branch of the revenue. A commission was granted for compounding with such as possessed crown lands on defective titles; and on this pretence some money was exacted of the people, &c. While the English were in the utmost discontent, and almost ready to break out in open rebellion, by these arbitrary proceedings, Charles thought proper to attempt settling up episcopacy in Scotland. The canons for established ecclesiastical jurisdiction were promulgated in 1635, and were received without much outward

opposition, but with great inward discontent. The first reading of the liturgy was attempted in the cathedral church of St Giles in Edinburgh, in 1637; but this produced such a tumult, that it was not thought safe to repeat the experiment. An universal combination against the religious innovations began immediately to take place; but Charles, as if obstinately bent on his own destruction, continued inflexible in his purpose, though he had nothing to oppose to the united force of the kingdom but a proclamation, in which he pardoned all past offences, and exhorted the people to be more obedient for the future, and to submit peaceably to the use of the liturgy. This proclamation hastened the insurrection. **FOUR TABLES**, as they were called, were formed in Edinburgh. One consisted of nobility, another of gentry, a 3d of ministers, and the 4th of burghesses. The table of gentry was divided into many subordinate ones, according to the different counties. In the hands of the Four Tables, the authority of the whole kingdom was placed. Orders were issued by them, and every where obeyed with the utmost regularity; and among the first acts of their government was the production of the **COVENANT**. This famous covenant consisted of a renunciation of Popery, formerly signed by James in his youth, and filled with many virulent invectives against that party. A bond of union followed, by which the subscribers obliged themselves to resist all religious innovations; and to defend each other against all opposition whatsoever; for the greater glory of God, and the greater honour and advantage of their king and country. The covenant was subscribed by people of all ranks and conditions. Few disapproved of it in their hearts, and still fewer dared openly to condemn it. The king's ministers and counsellors themselves were mostly of the same way of thinking; and none but rebels to God, and traitors to their country, it was thought, would withdraw themselves from so salutary and pious a combination. The king now began to be alarmed. He sent the marquis of Hamilton, as commissioner, to treat with the covenanters. He required the covenant to be renounced and recalled; and he thought that on his part he made very satisfactory concessions, when he offered to suspend the canons and liturgy till in a fair and legal way they could be received, and so to model the high commission, that it should no longer give offence to his subjects. In answer to this demand the covenanters told him, they would sooner renounce their baptism; and invited the commissioner himself to sign it. Hamilton returned to London; made another fruitless journey with new concessions to Edinburgh; returned again to London, and was immediately sent back with still more satisfactory concessions. The king was now willing to abolish entirely the canons, the liturgy, and the high commission court; he even resolved to limit extremely the power of the bishops, and was content if on any terms he could retain that order in the church of Scotland. And to ensure all these gracious offers, he gave Hamilton authority to summon first an assembly, and then a parliament, where every national grievance should be redressed. Their successive concessions only showed the

weakness of the king, and encouraged the contents to rise in their demands. The offer, however, of an assembly and a parliament, in which they expected to be entirely masters, was very willingly embraced by the covenanters. Charles, perceiving what advantage his enemies had reaped from their covenant, resolved to have a covenant also on his side; and he ordered one to be drawn up for that purpose. It consisted of the same violent renunciation of Popery with the other; which though the king did not approve of it, he thought proper to adopt, in order to remove all suspicion. As the covenanters, in their bond of mutual defence against all opposition, had been careful not to except the king; Charles had formed a bond which was annexed to this renunciation, in which expressed the subscriber's loyalty and duty to his majesty. But the covenanters perceiving that this new covenant was only meant to weaken and divide them, received it with the utmost contempt; and proceeded to model the assembly from which such great achievements were expected. The assembly met at Glasgow in 1638; a firm determination had been entered into of wholly abolishing episcopacy; and, as a preparative to it, there was laid before the presbytery of Edinburgh, and solemnly read in all the churches of the kingdom, an accusation against the bishops, as guilty of heresy, simony, bribery, perjury, incest, adultery, fornication, common swearing, drunkenness, gaming, breach of the sabbath &c. The bishops sent a protest, declining the authority of the assembly; the commissioner protested against that court, as illegally constituted and elected; and, in his majesty's name, dissolved it. This measure was foreseen, and regarded. The court still continued to sit in business. All the acts of assembly, from the accession of James VI. to the crown of England were, upon pretty reasonable grounds, declared null and invalid. The acts of parliament which affected ecclesiastical affairs were on that very account supposed to have no authority. And the whole fabric which James and Charles, in a long course of years, had been rearing with care and policy, fell at once to the ground. The covenant likewise was ordered to be signed by every one, under pain of excommunication. In 1639, the covenanters prepared in earnest for war. The earl of Argyle, though he long seemed to temporize, at last embraced the covenant, and became the chief leader of that party. The earls of Rothes, Cassilis, Montrose, Lothian, the lords Lindesay, Loudoun, Yester, and Balmerino, distinguished themselves. Many of their officers who had acquired reputation in the German war, and under Gustavus, were invited over to their country. The command was entrusted to Leslie, a soldier of experience and ability. They were regularly enlisted and disciplined. And were imported from foreign countries. A few castles which belonged to the king, being supplied of victuals, ammunition, and garrisons, were soon seized. And the whole country, except a small part, where the marquis of Huntly still adhered to the king, being in the covenanters' hands, was soon put into a tolerable posture of defence. Charles, on the other hand, was not deficient

endeavours to oppose this formidable combination. By regular economy he had not only paid the debts contracted in the French and Spanish wars, but had amassed a sum of £.200,000; which he had reserved for any sudden exigency. The queen had great interest with the catholics, both from being of their religion, and from the favours which she had procured them. She easily persuaded them to give large contributions, as a part of their duty to the king, during this urgent necessity: Thus, a considerable supply was gained, and the king's fleet became formidable. Having put 3000 land forces on board, he intrusted to the marquis of Hamilton, who had orders to go to the frith of Forth, and cause a diversion in the forces of the malcontents. An army was levied near 20,000 foot and 3000 horse; and was put under the command of the earl of Arundel, a nobleman of great family, but celebrated neither for military nor political abilities. The earl of Essex, a man of strict honour, and extremely popular, especially among the soldiery, was appointed lieutenant general: The earl of Holland was general of the horse. The king himself joined the army, and summoned all the peers of England to attend him. The whole had the appearance of a splendor rather than a military armament, and in this situation the camp arrived at Berwick. The Scottish army was equally numerous with that of the king, but inferior in cavalry. The officers had more experience; and the soldiers, though ill disciplined and armed, were animated, as well by national aversion to England, and the dread of becoming a province to their old enemy, as by religious enthusiasm which was the occasion of the war. Yet so prudent were their leaders, that they immediately sent very submissive messages to the king, and craved leave to be admitted to a treaty.—Charles, as usual, took the worst course, concluded a sudden pacification, in which it stipulated, that he should withdraw his fleet and army; that within 48 hours the Scots should disband their forces; that the king's forts should be restored to him; his authority be acknowledged; and a general assembly and parliament be immediately summoned, to settle all differences. The peace was not of long duration. Charles did not prevail on himself to abandon the cause of episcopacy, and secretly intended to seize every favorable opportunity to recover the ground he had lost. The assembly, on the other hand, proceeded with zeal and firmness. They voted episcopacy to be unlawful in the church of Scotland: stigmatized the canons and liturgy as popish: justly denominated the high commission tyranny. The parliament, which sat after the assembly, adopted measures, which tended to diminish the civil power of the monarch; and, what was particularly affected Charles still more, they were proceeding to ratify the acts of assembly, when, on the king's orders, Traquair the commissioner argued them. On account of these proceedings, which might have been easily foreseen, war recommenced the same year. No sooner had Charles concluded the peace, than he found himself obliged to disband his army, on account of want of money; and as the soldiers had been together merely by mercenary views, it was

not possible, without great trouble, expence, and loss of time, to reassemble them. On the contrary, the covenanters, in dismissing their troops, had been careful to preserve nothing but the appearance of a pacification. The officers had orders to be ready on the first summons: The soldiers were warned not to think the nation secure from an English invasion: And the religious zeal which animated all ranks of men made them immediately fly to their standards, as soon as their trumpet was sounded by their spiritual and temporal leaders. In 1640, however, the king made shift to draw an army together; but finding himself unable to support them, was obliged to call a parliament after an intermission of about 11 years. As the sole design of the king's calling this parliament was to obtain a supply, and the only reason they had for attending was to procure a redress of grievances, it is not to be supposed there could be any good agreement between them. The king accordingly insisted for money, and the parliament on their grievances, till a dissolution ensued.—To add to the unpopularity of this measure, the king, notwithstanding his dissolving the parliament, allowed the convocation to sit; a practice of which, since the reformation, there had been very few examples, and which was now by many deemed very irregular. Besides granting to the king a supply from the spirituality, the convocation, jealous of innovations similar to those which had taken place in Scotland, imposed an oath on the clergy and the graduates in the universities, by which every one swore to maintain the established government of the church, by archbishops, bishops, deans, chapters, &c. These steps were deemed illegal, because not ratified by consent of parliament; and the oath, containing an *Ecce* in the middle of it, became a subject of general ridicule. The king, disappointed of parliamentary subsidies, was obliged to have recourse to other expedients. The ecclesiastical subsidies served him in some stead; and it seemed but just, that the clergy should contribute to the expence of a war, which had been in a great measure of their own raising. He borrowed money from his ministers and courtiers; and so much was he beloved among them, that above 300,000*l.* were subscribed in a few days. Some attempts were made towards forcing a loan from the citizens; but still repelled by the spirit of liberty, which was now become invincible. A loan of 40,000*l.* was extorted from the Spanish merchants who had business in the tower. Coat and conduct money for the soldiery was levied on the counties; an ancient practice, but supposed to be abolished by the petition of right. All the pepper was bought from the East India Company upon trust; and sold, at a great discount, for ready money. A scheme was proposed for coining 2, or 300,000*l.* of base money. Such were the extremities to which Charles was reduced. The fresh difficulties, which were every day raised, with regard to the payment of ship-money, obliged him to exert continual acts of authority, augmented extremely the discontents of the people, and increased his indigence and necessities. The expedients now adopted, however, enabled the king, though with great difficulty, to march his army, consisting of 19,000 foot and 2000 horse. The

earl of Northumberland was appointed general; the earl of Strafford, who was called over from Ireland, lieutenant-general; lord Conway, general of the horse. A small fleet was thought sufficient to serve the purposes of this expedition. The Scots, though somewhat superior, were sooner ready than the king's army, and marched to the borders of England. Notwithstanding their warlike preparations and hostile attempts, the covenanters still preserved the most submissive language to the king; and entered England with no other design, they said, than to obtain access to the king's presence, and lay their humble petition at his royal feet. At Newburn upon Tyne they were opposed by a detachment of 4500 men under Conway, who resolved to dispute with them the passage of the river. The Scots first intreated them, with great civility, not to stop them in their march to their gracious sovereign; and then attacked them with great bravery, killed several, and chased the rest from their ground. Such a panic seized the whole English army, that the forces at Newcastle fled immediately to Durham; and not yet thinking themselves safe, they deserted that town, and retreated into Yorkshire. The Scots continued to advance; they dispatched messengers to the king, who was now arrived at York. They took care, after the advantage they had gained, to redouble their expressions of loyalty, duty, and submission to his person; and they even made apologies full of sorrow and contrition for their late victory. Charles was in a very distressed condition; and, to prevent the further advance of the Scots, agreed to a treaty, and named 16 English noblemen to meet with 11 Scots commissioners at Rippon. Strafford, upon whom, by reason of Northumberland's sickness, the command of the army had devolved, advised Charles rather to put all to hazard, than to submit to such unworthy terms as he saw would be imposed upon him. He advised him to push forward and attack the Scots, and bring the affair to a quick decision; and if he was ever so unsuccessful, nothing worse could befall him, than what from his inactivity he would certainly be exposed to; and, to show how easily this project might be executed, he ordered an assault to be made on some quarters of the Scots, and gained an advantage over them. This salutary advice Charles had not resolution to follow. He therefore resolved to call a council of the peers; and as he foresaw that they would advise him to call a parliament; he told them in his first speech, that he had already taken that resolution. In order to subvert both armies, (for the king was obliged to pay his enemies, in order to save the northern counties,) Charles wrote to the city, desiring a loan of 200,000*l*. And the peers at York, whose authority was now much greater than that of their sovereign, joined in the same request. The parliament met on the 3d Nov. 1640.

(45.) ENGLAND, HISTORY OF, UNTIL THE INSURRECTION AND MASSACRE IN IRELAND. The house of commons had never been observed so numerous, as at the meeting on the 3d Nov. 1640. That they might strike a decisive blow at once against the court, they began with the impeachment of the earl of Strafford.

That nobleman who was considered as prime minister, both on account of the credit he possessed with his master, and his own uncommon vigour and capacity, had now the misfortune of having incurred the hatred of all the three kingdoms. The Scots looked upon him as the capital enemy of their country. He had engaged the parliament of Ireland to advance large subsidies to be employed in a war against them: he had levied an army of 9000 men, with which he had menaced all their western coast: he had obliged the Scots who lived under his government to renounce the covenant, &c. he had governed Ireland, first as deputy, and then as lord lieutenant, during 8 years, with great vigilance, activity, and prudence, but with very little popularity. In a nation so averse to the English government and religion, these services were sufficient to draw on him the public hatred. His manners, besides, were haughty, rigid, and severe; and no sooner did adversity begin to seize him, than the concealed aversion blazed up at once, and the Irish parliament used every expedient to aggravate the charge against him. The universal discontent which prevailed throughout the English nation was all pointed against the earl of Strafford. He had formerly been a leader of opposition, before he became the favourite of the king. His former associates in popular councils, finding that he owed his advancement to the desertion of their cause, represented him as the great apostate of the commonwealth, whom it behoved them to sacrifice as a victim to public justice. "You have left us," said the famous Pym, "but we shall not leave you while your head is on your shoulders." From this terrible a combination against a single person, nothing else could be expected than what happened: Strafford was impeached, condemned, and at last executed, in 1641. It was not without extreme difficulty, that the king could be brought to consent to his execution. He came to the bar of lords, where he expressed his resolution never to employ Strafford again in any public business: but with regard to the treason for which he was condemned, he professed himself totally dissatisfied. The commons voted it a breach of privilege for the king to take notice of any bill depending before the house. Charles did not perceive, that his attachment to Strafford was the chief motive for the bill; and the greater proof he gave of this attachment to his favourite minister, the more inevitable did he render his destruction. The house of lords were intimidated by popular violence, into passing the bill of attainder against the unfortunate earl. The same battery was next employed to force the king's assent. The populace flocked about Whitehall, and accompanied their demand of justice with the loudest clamours and most open menaces. Reports of conspiracies, insurrections, and invasions, were spread abroad. On whatever side the king cast his eyes, he saw no resource but security. All his servants, consulting their own safety rather than their master's honour, declined interfering with their advice between him and his parliament. The queen, terrified at the appearance of so great danger, pressed Charles, with tears, to satisfy his people in this demand, which it was hoped would finally content them. Alas!

tion alone had the courage to advise him, if he did not approve of the bill, by no means to consent to it. Strafford, hearing of the king's irresolution and anxiety, wrote to him a letter, in which he desired his own execution, in order to restore peace to the nation: and at last, after the most violent anxiety and doubt, Charles granted commission to four noblemen, in his name, to receive the royal assent to the bill; flattering himself, that as neither his will consented to it, he was the more free from all the guilt which attended it. These commissioners he empowered at the same time to give his assent to a bill yet more fatal himself, viz. That the present parliament should not be dissolved, prorogued, or adjourned, without their own consent. By this last bill Charles secured the power of his enemies perpetual, as was already uncontrollable. The reason of this extraordinary step was, that the commons, from policy, more than necessity, had embraced the expedient of paying the two armies by borrowing money from the city. These loans they repaid afterwards by taxes levied on the people. At last the citizens, either of themselves, or by suggestion, began to start difficulties with regard to a loan which was demanded. "We make scruple of trusting the parliament (said they), we are certain that the parliament was to continue till our repayment. But, in the present precarious situation of affairs, what security can be given us for our money?" To obviate this objection, the above mentioned bill was suddenly introduced, and having passed both houses with great rapidity, was at last brought to the king; who, being oppressed with grief on account of the unhappy fate of Strafford, did not perceive the vicious consequence of the bill. All this time the commons had ruled in other respects with an uncontrollable sway. Soon after the impeachment of Strafford, Laud was accused of high treason, and committed to custody. To avoid the same fate, lord keeper Finch and secretary Windesore fled, the one into Holland, the other into France. The house instituted a new species of crime, termed *delinquency*: those who had exercised the powers necessary for the defence of the nation during the late military operations, were now termed *delinquents*. In consequence of this determination, many of the nobility and gentry, while they exerted, as they thought, the legal powers of magistracy, found themselves unexpectedly involved in this new crime of delinquency. The commons, however, by their institution, reaped a multiplied advantage; they disarmed the crown; they established the maxims of rigid law and liberty, and they spread the terror of their own authority. All the sheriffs who had formerly exacted ship-money, though by the king's express command, were now declared delinquents. The farmers and officers of the customs who had been employed during so many years in levying tonnage, poundage, &c. were likewise denominated delinquents, and were afterwards glad to implore for a pardon, by paying 150,000*l*. Every discretionary or arbitrary sentence of the exchequer and high commission courts, underwent a severe scrutiny; and all those who had

concurred in such sentences, were voted to be liable to the penalties of law. No minister of the king, no member of the council, but found himself exposed by this determination. The judges who had formerly given judgment against the celebrated HAMDEN for refusing to pay ship-money, were accused before the peers, and obliged to find security for their appearance. Berkley, a judge of the king's bench, was seized by order of the house, even when sitting in his tribunal. The sanction of the lords and commons, as well as that of the king, was declared necessary for the confirmation of ecclesiastical canons. Monopolists and projectors, if of the king's party, were now expelled the house; but one Mildmay, a notorious monopolist, was allowed to keep his seat, because he was of the popular party. In short, the constitution was completely new-modelled; and during the first period of the transactions of this remarkable parliament, if we except Strafford's attainder, their merits in other respects so much overbalance their mistakes, as to entitle them to very ample praises from all lovers of liberty. Not only were former abuses remedied, and grievances redressed; great provision for the future was made by excellent laws against the return of the like complaints. And if the means by which they obtained such mighty advantages favoured often of artifice, sometimes of violence; it is to be considered, that revolutions of government cannot be effected by mere force of argument and reasoning; and that, factions being once excited, men can neither so firmly regulate the tempers of others, nor their own, as to ensure themselves against all exorbitancies. The king had promised to pay a visit, this summer, to his subjects in Scotland, in order to settle their government, and though the English parliament was very importunate with him to lay aside that journey, they could not prevail with him so much as to delay it. Having failed in this, they appointed a small committee of both houses to attend him, in order, as was pretended, to see the articles of pacification executed, but really to act as spies upon the king, to extend still farther the ideas of parliamentary authority, as well as to eclipse his majesty. Endeavours were even used, before Charles's departure, to have a protector of the kingdom appointed, with a power to pass laws without having recourse to the king. About this time, the king concluded the marriage of the princess Mary with William prince of Orange. He did not conclude this alliance without communicating his intentions to parliament, who were very well satisfied with the proposal. They adjourned from Sept. 9th to Oct. 20th, 1641. Charles arrived in Scotland August 14th, 1641, with a design to give full satisfaction if possible, to this restless kingdom. Some good regulations were made; the bench of bishops and lords of articles were abolished; it was ordained that no man should be created a Scottish peer, who possessed not 10,000 marks (above 500*l*.) of annual rent in the kingdom; a law for triennial parliaments was likewise enacted; and it was ordained, that the last act of every parliament should be to appoint the time and place for holding the parliament next ensuing; the king was also deprived of the power formerly exercised, of issuing proclamations

proclamations which enjoined obedience under the penalty of treason. But the most fatal blow given to royal authority, and what in a manner dethroned the king, was an article, that no member of the privy council, in whose hands, during the king's absence, the whole administration lay, no officer of state, nor any of the judges, should be appointed but by advice and approbation of parliament. Charles even agreed to deprive of their seats four judges who had adhered to his interests; and their place was supplied by others more agreeable to the ruling party. Several of the covenanters were also sworn of the privy council, and all the ministers of state, counsellors and judges, were, by law, to hold their places during life or good behaviour. The king, while in Scotland, conformed himself to the established church; he bestowed pensions and preferments on Henderson, Gillespie, and other popular preachers; he practised every art to soften, if not to gain, his greatest enemies; the earl of Argyle was created a marquis, lord Loudon an earl, and Ledly was dignified with the title of *Lord Leven*. But though Charles was thus obliged to heap favours on his enemies and overlook his friends, the former were not satisfied, as believing all he did proceeded from artifice and necessity; while some of the latter were disgusted, and thought themselves ill rewarded for their past services. Argyle and Hamilton, being seized with an apprehension, real or apprehended, that the earl of Crawford and others meant to assassinate them, left the parliament suddenly, and retired into the country: but, upon invitation and assurances, returned in a few days. This event, which in Scotland had no visible consequence, was commonly denominated *the incident*; but though this incident had no effect in Scotland, it was attended with very serious consequences in England. The English parliament immediately took the alarm; or rather probably were glad of the hint; they insinuated to the people, that the *malignants*, (so they called the king's party), had laid a plot at once to murder them and all the godly in both kingdoms. They applied therefore to Essex, whom the king had left general of the south of England; and he ordered a guard to attend them. In the mean time a most dangerous rebellion broke out in Ireland, with circumstances of unparalleled horror, bloodshed, and devastation. The old Irish, by the wise conduct of James, had been fully subdued, and proper means taken for securing their dependence and subjection for the future; but their old animosity still remained, and only wanted an occasion to exert itself. This they obtained from the weak condition to which Charles was reduced, and this was made use of in the following manner. One Roger More, a gentleman descended from an ancient Irish family, but of narrow fortune, first formed the project of expelling the English, and asserting the independency of his native country. He secretly went from chieftain to chieftain, and roused up every latent principle of discontent. He maintained a close correspondence with lord Maguire and Sir Pheilm O'Neale, the most powerful of the old Irish; and by his persuasions soon engaged not only them, but the most considerable persons of the nation, into a conspi-

racy; and it was hoped, the English of the pale, they were called, or the old English planters, being all catholics, would afterwards join the party which restored their religion to its ancient splendour. The plan was, that Sir Pheilm O'Neale and the other conspirators, should begin an insurrection on one day throughout the province and should attack all the English settlements; and that, on the very same day, lord Maguire and Roger More should surprise the castle of Dublin. They fixed on the beginning of winter for the commencement of this revolt; that there might be more difficulty in transporting forces into England. Succours to themselves, and supplies of arms, they expected from France, in consequence of a promise made them by cardinal Richelieu; and many Irish officers who had served in the Spanish troops had given assurance of their concurrence, as soon as they saw an insurrection entered upon by their Catholic brethren. News which every day arrived from England, of the fury expressed by the commons against all Papists, struck fresh terror into the Irish nation, kindled the conspirators to execute their fatal purpose, and assured them of the concurrence of the countrymen. Such a propensity was discovered in all the Irish to revolt, that it was deemed necessary as well as dangerous to trust the fact in many hands; and though the day appointed drew nigh, no discovery had yet been made by the government. The king, indeed, had received information from his ambassadors, that some time was in agitation among the Irish in foreign parts, but though he gave warning to the administration in Ireland, his intelligence was entirely neglected. They were awakened from their security only a few days before the commencement of hostilities. The castle of Dublin, by which the capital was commanded, contained arms for 10,000 men, 35 pieces of cannon, and a proportionable quantity of ammunition. Yet was this important place guarded by no greater force than 50 men. Lord Maguire and More were already in town with a numerous band of their retainers; others were expected that night; and next morning they entered upon what they esteemed the execution of all enterprises, the surprisal of the castle. O'Connell, however, an Irish protestant, discovered the conspiracy. The justices and council fled immediately to the castle, and reinforced the garrison. The city was instantly alarmed, and all the protestants prepared for defence. More escaped, but Maguire was taken; and Mahon, one of the conspirators, being likewise seized, first discovered to the justices the project of a general insurrection. But though O'Connell's discovery saved the castle, Mahon's confession came too late to prevent the insurrection. O'Neale and his confederates had already taken arms in Ulster. The houses, cattle, and goods of the English were first seized. Those who heard of the commotions in their neighbourhood, instead of deserting their habitations and assembling together for mutual protection, remained at home in hopes of defending their property; and thus fell separately into the hands of their enemies. An universal massacre now commenced, accompanied with circumstances of unequaled barbarity. No age, sex, or condition

spared. All connections were dissolved, and all was often dealt by that hand from which detection was implored and expected. All the gures which wanton cruelty could devise, all the lingering pains of body, the anguish of mind, the agonies of despair, could not satiate revenge cited without injury, and cruelty derived from relenting bigotry. Such enormities, in short, were committed, that if not attested by undoubted evidence, they would appear incredible. The city buildings or commodious habitations of planters, as if upbraiding the sloth and ignorance of the natives, were burnt or levelled with the ground; and where the miserable owners, shut up their houses, and preparing for defence, perished in the flames, together with their wives and children, a double triumph was afforded to their killing foes. If any where a number assembled together, and resolved to oppose the assassins; they were disarmed by capitulations and promises of safety, confirmed by the most solemn oaths. No sooner had they surrendered, than the rebels, with a perfidy equal to their cruelty, made them share the fate of their unhappy countrymen. They tempted their prisoners, by the fond love of life, to embroil their hands in the blood of sons, brothers, or parents; and having thus considered them accomplices in their own guilt, sent them that death which they sought to them as deserving it. Such were the barbarities, by which Sir Phelim O'Neale and the Irish in Ulster realized their rebellion. More, shocked at the state of these enormities, flew to O'Neale's aid; but found that his authority, which was sufficient to excite the Irish to a rebellion, was too feeble to restrain their inhumanity. Soon after, abandoned the cause, and retired to Flanders. In Ulster, the flames of rebellion were diffused as an instant over the other three provinces. In all ages, death and slaughter were common; though the Irish in these other provinces pretended to act with moderation and humanity. But cruel and barbarous was their humanity! Not content with peling the English from their houses, they stripped them of their very clothes, and turned them naked and defenceless to all the severities of the season. The heavens themselves, as if concurring against that unhappy people, were armed with cold and tempest unusual to the climate, and executed what the sword had left unfinished. Some computations, those who perished by all the cruelties amounted to 150, or 200,000; but the most moderate, they could not have been less than 40,000. The English of the pale pretended to blame the insurrection, and to detest the barbarity with which it was accompanied. By their protestations and declarations they engaged the justices to supply them with arms, which they promised to employ in defence of government. But the interests of their intolerant religion were found to be more prevalent over them than loyalty to their native country. They chose lord Mountmellick their leader; and, joining the old Irish, rivalled them in every act of cruelty towards the English Protestants. Besides many smaller bands, dispersed over the kingdom, the main army of the rebels amounted to 20,000 men, and besieged Dublin with an immediate siege. Both

the English and Irish rebels conspired in one imposture, by which they seduced many of their countrymen. They pretended authority from the king and queen, but especially the latter, for their insurrection; and they affirmed that the cause of their taking arms was to vindicate the royal prerogative, now invaded by the puritanical parliament. Sir Phelim O'Neale, having found a royal patent in the house of Lord Caulfield, whom he had murdered, tore off the seal, and affixed it to a commission which he had forged for himself.

(46.) ENGLAND, HISTORY OF, UNTIL THE INSTITUTION OF THE SOLEMN LEAGUE AND COVENANT. King Charles received intelligence of this insurrection while in Scotland, and immediately acquainted the Scots parliament with it. He hoped, as there had all along been such an outcry against Popery, that now, when that religion was appearing in its blackest colours, the whole nation would vigorously support him in the suppression of it. But here he found himself mistaken. The Scots considering themselves now as a republic, and conceiving hopes from the present distresses of Ireland, they resolved to make an advantageous bargain for the succours with which they should supply the neighbouring nation. Except dispatching a small body of forces, to support the Scots colonies in Ulster, they would, therefore, go no farther than to send commissioners to London, in order, to treat with the parliament, to whom the sovereign power was in reality transferred. The king, too, sensible of his utter inability to subdue the Irish rebels, found himself obliged, in this exigency, to have recourse to the English parliament, and depend on their assistance for supply. He told them, that the insurrection was not, in his opinion, the result of any rash enterprise, but of a formed conspiracy against the crown of England. To their care and wisdom, therefore, he said, he committed the conduct and prosecution of the war, which, in a cause so important to national and religious interests, must of necessity be immediately entered upon, and vigorously pursued. The English parliament, now re-assembled, discovered in each vote the same dispositions in which they had separated. Nothing less than a total abolition of monarchy would serve their turn. But this project it had not been in the power of the popular leaders to have executed, had it not been for the passion which seized the nation for the presbyterian discipline, and the enthusiasm which attended it. By the difficulties and distresses of the crown, the commons, who possessed alone the power of supply, had aggrandized themselves; and it seemed a peculiar happiness, that the Irish rebellion had succeeded, at such a critical juncture, to the pacification in Scotland. That expression of the king's, by which he committed to them the care of Ireland, they immediately laid hold of, and interpreted in the most unlimited sense. They had on other occasions been gradually encroaching on the executive power of the crown, which forms its principal and most natural branch of authority; but with regard to Ireland, they at once assumed it, fully and entirely, as if delivered over to them by a regular gift. And to this usurpation the king

was

was obliged passively to submit, both because of inability to resist, and lest he should expose himself still more to the charge of favouring the rebels; a reproach eagerly thrown upon him by the popular party, as soon as they heard that the Irish pretended to act by his commission. Nay, while they pretended the utmost zeal against the insurgents, they took no steps for their suppression, but such as likewise gave them the superiority in those commotions, which they foresaw must be soon excited in England. They levied money under pretence of the Irish expedition, but reserved it for purposes which concerned them more nearly: they took arms from the king's magazines, but still kept them with a secret intention of making use of them against himself: whatever law they deemed necessary for aggrandizing themselves, they voted, under colour of enabling them to recover Ireland; and if Charles withheld his royal assent, the refusal was imputed to those pernicious counsels, which at first excited to Popish rebellion, and which still threatened total ruin to the Protestant interest throughout his dominions. And though no forces were for a long time sent over into Ireland, and very little money remitted during the extreme distress of that kingdom; so strong was the people's attachment to the commons, that the fault was not imputed to those pious zealots, whose votes breathed nothing but death and destruction to the Irish rebels. The conduct of the parliament towards the king now became exceedingly unreasonable, unjust, and cruel. It was thought proper to frame a general remonstrance of the state of the kingdom; and accordingly the committee, which at the first meeting of the parliament had been chosen for that purpose, were commanded to finish their undertaking. The king returned from Scotland, Nov. 25th, 1641. He was received in London with the shouts and acclamations of the populace, and with every demonstration of regard and affection. Sir Richard Gournay, lord mayor, a man of great merit and authority, had promoted these favourable dispositions; and had engaged the populace, who so lately insulted the king, to give him these marks of their dutiful attachment. But all the pleasure, which Charles reaped from this joyful reception, was soon damped by the remonstrance of the commons, which was presented to him together with a petition of the like nature. The bad counsels which he followed were there complained of; his concurrence in the Irish rebellion plainly insinuated; the scheme laid for the introduction of popery and superstition was inveighed against; and for a remedy to all these evils, the king was desired to entrust every office and command to persons in whom his parliament should have cause to confide. By this phrase, which was very often repeated in all the memorials and addresses of that time, the commons meant themselves and their adherents. To this remonstrance Charles was obliged to make a civil reply, notwithstanding his subjects had transgressed all bounds of respect and even good manners in their treatment of him. It would be tedious to point out every invasion of the prerogative now attempted by the commons: but finding themselves at last likely to be opposed by the nobility, who saw their own depression

closely connected with that of the crown, they openly told the upper house, that "they themselves were the representatives of the whole body of the kingdom, and that the peers were nothing but individuals, who held their seats in a particular capacity; and therefore, if their lords would not consent to acts necessary for the preservation of the people, the commons, together with such of the lords as were more sensible of the danger, must join together and represent the matter to his majesty." Every method proper for alarming the people was now put in practice. The commons affected continual fears of destruction to themselves and to the whole nation. They excited the people by never ceasing inquiries after conspiracies, by reports of insurrections, by feigned intelligence of invasions from abroad, and by discoveries of dangerous combinations at home, against Papists and their adherents. When Charles dismissed the guard, which they had ordered during his absence, they complained; and, upon his promising them a new guard under the command of the earl of Lindsey, they absolutely refused the offer: they ordered halberds to be brought into the hall where they assembled, and thus armed themselves against those conspiracies with which they said they were hourly threatened. Several reduced officers, and young gentlemen of the use of court, during this time of distress and danger, offered their service to the king. Between them and the populace there passed frequent skirmishes which ended not without bloodshed. By way of reproach, these gentlemen gave the populace the name of *Round-heads*, on account of their cropped hair; while they distinguished the others by the name of *Cavaliers*. And thus the nation, which was before sufficiently provided with religious as well as civil causes of quarrel, was now supplied with party names, under which the factions might signalize their mutual hatred. Those tumults continued to increase about Westminster and Whitehall. The cry continually resounded against bishops and *rotten-hearted lords*. The former especially, being easily distinguishable by their habit, and being the object of violent hatred to all the sectaries, were exposed to the most dangerous insults. The Abp. of York, having been abused by the populace, hastily called a meeting of his brethren. By his advice a protestation was drawn and addressed to the king and the heads of lords. The bishops there set forth, that though they had an undoubted right to sit and vote in parliament, yet in coming thither they had been menaced, assaulted, affronted, by the unruly multitude, and could no longer with safety attend their duty in the house. For this reason they protested against all laws, votes, and resolutions, a null and invalid, which should pass during the time of their forced absence. This protestation, which, though just and legal, was certainly untimed, was signed by 12 bishops, and communicated to the king, who hastily approved it. As soon as it was presented to the lords, that house desired a conference with the commons, whom they informed of this unexpected protestation. The opportunity was seized with joy and triumph. An impeachment of high treason was immediately sent up against the bishops, as endeavouring to

subvert

subvert the fundamental law, and to invalidate the authority of the legislature. They were, on the first demand, sequestered from parliament, and committed to custody. No man in either house ventured to speak a word in their vindication: so much was every one displeased at the egregious imprudence of which they had been guilty. One person said, that he did not believe them guilty of high treason; but that they were *stark mad*, and therefore desired that they might be sent to *Bedlam*. This was a fatal blow to the royal interest; but it soon felt a much greater from the imprudence of the king himself. Charles had long suppressed his resentment, and only strove to gratify the commons by the greatness of his concessions; but finding that all his compliance had but increased their demands, he could no longer contain. He gave orders to Herbert his attorney general to enter an accusation of high treason, in the house of peers, against lord Kimbolton, one of the most popular men of his party; together with five composers, Sir Arthur Haslerig, Hollis, Hambro, Pym, and Strode. The articles were, that they had traitorously endeavoured to subvert the fundamental laws and government of the kingdom, to deprive the king of his regal power, and to impose on his subjects an arbitrary and tyrannical authority; that they had invited a foreign army to invade the kingdom; that they had aimed at subverting the very right and being of parliaments; and actually raised and countenanced tumults against the king. Men had scarce leisure to wonder at the precipitancy and imprudence of this impeachment, when they were astonished by another measure still more rash and unsupported. A serjeant at arms, in the king's name, descended of the house the five members, and was sent back without any positive answer. This was followed by a conduct still more extraordinary. The next day, the king himself entered the house of commons alone, advancing through the hall, till all the members stood up to receive him. The speaker withdrew from his chair, and the king took possession of it. Having seated himself, and looked round him for some time, he said to the house, that he was sorry for the occasion that forced him thither; that he was come in person to seize the members whom he had accused of high treason, seeing they would not deliver him up to his serjeant at arms. Then addressing himself to the speaker, he desired to know whether any of them were in the house; but the speaker falling on his knees, replied, that he had neither eyes to see nor tongue to speak, in that place, but as the house was pleased to instruct him; and he asked pardon for being able to give no other answer. The king sat for some time, to see if the accused were present; but they had escaped a few minutes before his entry. Thus disappointed, perplexed, and not knowing whom to rely, he next proceeded amidst the wailings of the populace, who continued to cry out, *Privilege! privilege!* to the common council of the city, and made his complaint to them. The common council answered his complaints by contemptuous silence; and, on his return, one of the populace, more insolent than the rest, cried out, "To your tents, O Israel!" a watch word

among the Jews, when they intended to abandon their princes. When the commons assembled the next day, they pretended the greatest terror; and passed an unanimous vote, that the king had violated their privileges, and that they could not assemble again in the same place, till they should obtain satisfaction, and have a guard for their security. The king had retired to Windsor, and from thence he wrote to the parliament, making every concession, and promising every satisfaction in his power. But they were resolved to accept of nothing, unless he would discover his advisers in that illegal measure; a condition to which, they knew, that, without rendering himself forever contemptible, he could not possibly submit. The commons had already stripped the king of almost all his privileges; the bishops were fled, the judges were intimidated; if now only remained, after securing the church and the law, that they should get possession of the sword also. The power of appointing governors and generals, and of levying armies, was still a remaining prerogative of the crown. Having therefore first magnified their terrors of Popery, which perhaps they actually dreaded, they proceeded to petition that the tower might be put into their hands; and that Hull, Portsmouth, and the fleet, should be intrusted to persons of their choosing. These were requests, the complying with which subverted what remained of the constitution; however, such was the necessity of the times, that they were first contested, and then granted. At last every compliance only increasing the avidity of making fresh demands, the commons desired to have a militia, raised and governed by such officers and commanders as they should nominate, under pretence of securing them from the Irish Papists, of whom they were under great apprehension.—Charles now first ventured to put a stop to his concessions. He was then at Dover attending the queen and the princess of Orange, who thought it prudent to leave the kingdom. He replied to the petition, that he had not now leisure to consider a matter of such great importance; and therefore would defer an answer till his return. But the commons alleged, that the dangers and distempers of the nation were such as could endure no longer delay; and unless the king should speedily comply with their demands, they should be obliged, both for his safety and that of the kingdom, to embody a militia by the authority of both houses. In their remonstrances to the king, they desired even to be permitted to command the army for an appointed time; which so exasperated him, that he exclaimed, "No, not for an hour." This answer broke off the treaty; and both sides resolved to have recourse to arms.—Charles, taking the prince of Wales with him, retired to York, where he found the people more loyal, and his cause backed by a more numerous party than he had expected. The queen, who was in Holland, was making successful levies of men and ammunition, by selling the crown jewels. But before war was openly declared, the shadow of a negotiation was carried on rather with a design to please the people than with any view of reconciliation. The parliament sent him the conditions on which they were willing to come to an agreement. Their de-

mands were contained in 19 propositions, and amounted to almost a total surrender of monarchical authority. They required that no man should remain in the council who was not agreeable to parliament; that no deed of the king's should have validity unless it passed the council, and was attested under their hand; and that all the officers of state should be chosen with consent of parliament; that none of the royal family should marry without consent of parliament or council; that the laws should be executed against Catholics; that the votes of popish lords should be excluded; that the reformation of the liturgy and church government should take place according to the advice of parliament; that the ordinance with regard to the militia be submitted to; that the justice of parliament may pass upon all delinquents; that a general pardon be granted with such exceptions as should be advised by parliament; that the forts and castles be disposed of by consent of parliament; and that no peers be made but with consent of both houses. War on any terms was esteemed, by the king and all his counsellors, preferable to so ignominious a peace. Charles accordingly resolved to support his authority by force of arms. "His towns (he said) were taken from him; his ships, his army, and his money: but there still remained to him a good cause, and the hearts of his loyal subjects; which with God's blessing, he doubted not, would recover all the rest." Collecting therefore some forces, he advanced southwards, and erected his royal standard at Nottingham. The king found himself supported in the civil war by the nobility and principal gentry; who dreading a total confusion of rank from the fury of the populace, inclined themselves under the banner of their monarch. The concurrence of the bishops and the church of England also increased the adherents of the king; but it may be affirmed, that the high monarchical doctrines too much inculcated by the clergy, had done him much ill. The majority of the nobility and gentry, who now attended the king in his distresses, breathed the spirit of liberty as well as of loyalty: and in the hopes of his submitting to a limited and legal government they were willing to sacrifice their lives and fortunes. On the other hand, the city of London, and most of the great corporations, took part with the parliament; and adopted with zeal those democratical principles on which these assemblies were founded. The example of the Dutch commonwealth, too, where liberty had so happily supported industry, made the commercial part of the nation desirous to see a like form of government established in England. Many families also, who had enriched themselves by commerce, saw with indignation, that, notwithstanding their opulence, they could not raise themselves to a level with the ancient gentry: they therefore adhered to a power by whose success they hoped to acquire rank and consideration. At first every advantage seemed to lie against the royal cause. The king was totally destitute of money. London, and all the sea-ports except Newcastle, being in the hands of parliament, they were secure of a considerable revenue; and the seamen naturally following the disposition of the ports to which they belonged, the parliament had the entire do-

minion of the sea. All the magazines of arms and ammunition they seized at first; and their fleet intercepted the greatest part of those sent by the queen from Holland. The king, in order to arm his followers, was obliged to borrow the weapons of the train'd bands, under promise of restoring them as soon as peace should be settled. The nature and qualities of his adherents alone gave the king some hopes of compensation for all the advantages possessed by his adversaries. More bravery and activity were expected from the nobles and gentry, than from the multitude. And as the landed gentlemen, at their own expence, levied and armed their tenants, besides their attachment to their masters, greater force and courage were to be expected from these rustic troops, than from the vicious and enervated populace of cities. Had the parliamentary forces, however, exerted themselves at first, they might have easily dissipated the small number the king had been able to collect, and which amounted to no more than 800 horse and 300 foot; while his enemies were within a few days march of him with 6000 men. In that time the parliamentary army were ordered to march to Northampton; and the earl of Essex, who had joined them, found the whole to amount to 15,000. The king's army too was soon reinforced from all quarters; but still, having no force capable of coping with the parliamentary army, he thought it prudent to retire to Derby, and from thence to Shrewsbury, to counteract the levies which his friends were making in those parts. At Wellington, a day's march from Shrewsbury, he made a rendezvous of all his forces, and issued his military orders to be read at the head of every regiment. That he might bind himself by reciprocal obligations, he here protested solemnly before his whole army, that he would maintain the Protestant religion according to the church of England; that he would govern according to the known statutes and customs of the kingdom; and particularly, that he would observe inviolable the laws to which he had given his consent during this parliament, &c. While Charles lay at Shrewsbury, he received the news of an action, the first which had happened in these parts, and where his party was victorious. On the appearance of commotions in England, the princes Rupert and Maurice, sons of the unfortunate elector palatine, had offered their services to the king; and the former at that time commanded a body of horse which had been sent to Worcester to watch the motions of Essex, who was marching towards the city. No sooner had the prince arrived, than he saw some cavalry of the enemy approaching the gates. Without delay he briskly attacked them as they were debiling from a lane, and formed themselves. Colonel Sandys their commander was killed, the whole party routed, and pursued above a mile. In 1642, October 23d, happened a general engagement at Edgehill, in which, though the royalists were at first victorious, their impetuosity lost the advantage they had gained; and 3000 men were found dead on the field of battle. Soon after the king took Banbury and Reading; and defeated two regiments of his enemies at Brentford, taking 500 prisoners. Thus ended the campaign in 1642; in which, though the king was

be advantage, yet the parliamentary army had increased to 24,000 men, and was much superior to his; notwithstanding which, they offered terms of peace. In 1643, the treaty was carried on, without any cessation of hostilities; and indeed the negotiation went no farther than the first demand on each side; for the parliament, finding a likelihood of coming to an accommodation, suddenly recalled their commissioners. On the 7th April, Reading surrendered to the parliamentary forces under the earl of Essex, who commanded a body of 18,000 men. The earl of Northumberland united in a league for the king the counties of Northumberland, Cumberland, Westmoreland, and the bishopric; and some time after engaged other counties in the same association. He also took possession of York, and dislodged the forces of the parliament at Tadcaster, but his story was not decisive. Other advantages were so gained by the royalists; the most important of which was the battle of Stratton, where the earl of Waller, who commanded the parliament's army, was entirely defeated, and forced to fly with only a few horse to Bristol. This happened on the 13th July; and was followed by the siege of that city, which surrendered to prince Rupert on the 15th of the same month. Though the taking of Bristol had cost the royalists dear, yet such a continued run of success had greatly dispirited the opposite party; and such confusion now prevailed in London, that some proposed to the king to march directly to that city, which it was hoped might be reduced either by an insurrection of the citizens, by victory, or by treaty, and thus an end put to the civil disorders at once. This advice, however, was rejected, on account of the great number of the London militia; and it was resolved first to reduce Gloucester, in consequence of which the king would have the whole course of the Sever under his command. The rich and malcontent counties of the west having then lost all protection from their friends, might be enforced to pay large contributions as an atonement for their disaffection; an open communication could be preserved between Wales and these new conquests; and half the kingdom being entirely freed from the enemy, the rest united into one firm body, might be employed in re-establishing the king's authority throughout the remainder. The siege of Gloucester commenced August 10th; but being defended by Malfey, a resolute governor, and well armed, it made a vigorous defence. The continuation at London, however, was as great as the enemy had been already at their gates; and in the midst of the general confusion, a design was formed by Waller of forcing the parliament to accept of some reasonable conditions of peace. He imparted his design to some others; but a discovery being made of their proceedings, he and two others were condemned to death. Waller, however, escaped with a fine of £10,000. The city of Gloucester in the mean time was reduced to the utmost extremity; and the parliament, as their last resource, dispatched Essex with an army of 14,000 men, in order to force the king to raise the siege of that city. This he accomplished; and when he entered, found only one barrel of gun-

powder left, and other provisions in the same proportion. On his return to London, he was intercepted by the king's army, with whom a desperate battle ensued at Newbury which lasted till night. Though the victory was left undecided, Essex next morning proceeded on his march, and reached London in safety, where he received the applause for his conduct he deserved. The king followed him on his march; and having taken possession of Reading after the earl left it, he there established a garrison, and straitened by that means London and the quarters of the enemy. During this summer, the earl, now marquis of Newcastle, had raised a considerable force for the king in the north; and great hopes of success were entertained from that quarter. There appeared, however, in opposition to him, two men on whom the event of the war finally depended, and who began about this time to be remarked for their valour and military conduct. These were Sir Thomas Fairfax, son to the lord of that name; and Oliver Cromwell. The former gained a considerable advantage over the royalists at Wakefield, and took general Goring prisoner: the latter obtained a victory at Gainborough over a party commanded by the gallant Cavendish, who perished in the action. But both these defeats were more than compensated by the total rout of lord Fairfax at Ather-ton moor, and the dispersion of his army, which happened on the 31st of July. After this victory, the marquis of Newcastle, 'fat down before Hull' with an army of 15,000 men; but being beat off by a sally of the garrison, he suffered so much that he thought proper to raise the siege. About the same time, Manchester, who advanced from the eastern associated counties, having joined Cromwell and young Fairfax, obtained a considerable victory over the royalists at Horn castle; where these two officers gained no small renown by their conduct. The king's party still remained much superior in those parts of England; and had it not been for the garrison of Hull, which kept Yorkshire in awe, a conjunction of the northern forces with the army in the south might have been made, and had probably enabled the king, instead of besieging Gloucester, to have marched directly to London, and put an end to the war. The battle of Newbury was attended with such loss on both sides, that it put an end to the campaign of 1643, by obliging both parties to retire into winter quarters. The event of the war being now very doubtful, both the king and parliament began to look for assistance from other nations. The former cast his eyes on Ireland, the latter on Scotland. The parliament of England had invited the Scots, from the commencement of the civil dissensions, to interpose their mediation, which they knew would be very little favourable to the king, and which for that reason he had declined. Early in spring 1643, this offer of mediation had been renewed, with no better success. The commissioners were also empowered to press the king to a compliance with the presbyterian worship and discipline. But this he absolutely refused, as well as to call a parliament in Scotland; so that the commissioners finding themselves unable to prevail in any one of their demands, returned home highly dissatis-

fied. The English parliament being now in great distress, sent commissioners to Edinburgh, to treat of a more close confederacy with the Scottish nation. The person they principally trusted to on this occasion was Sir Henry Vane, who in eloquence, address and capacity, as well as in art and dissimulation, was not surpassed by any one in that age so famous for active talents. By his advice was framed at Edinburgh the **SOLÉMN LEAGUE AND COVENANT**; which exceeded all former protestations and vows taken in both kingdoms, and long maintained its credit and authority. In this covenant, the subscribers, besides engaging mutually to defend each other against all opponents, bound themselves to endeavour, without respect of persons, the extirpation of popery and prelacy, superstition, heresy, and profaneness; to maintain the rights and privileges of parliaments, together with the king's authority; and to discover and bring to justice all incendiaries and malignants. They vowed also to preserve the reformed religion established in the church of Scotland; but no declaration more explicit was made with regard to England and Ireland, than that these kingdoms should be reformed according to the word of God, and the example of the purest churches.

(47.) **ENGLAND, HISTORY OF, UNTIL THE KING'S COMPLETE DEFEAT AT NASEBY.** Great were the rejoicings among the Scots, that they should be the happy instruments of extending their mode of religion, and dissipating the profound darkness in which the neighbouring nations were involved. And being determined that the sword should carry conviction to all refractory minds, they prepared with great vigilance and activity for their military enterprizes; so that, having added to their other forces the troops which they had recalled from Ireland, they were ready about the end of the year to enter England, under their old general the earl of Leven, with an army of above 20,000 men. The king, to secure himself, concluded a cessation of arms with the Irish rebels, and recalled a considerable part of his army from Ireland. Some Irish catholics came over with these troops, and joined the royal army, where they continued the same cruelties and disorders to which they had been accustomed. The parliament voted, that no quarter in any action should be given them. But prince Rupert, by making some reprisals, soon repressed this inhumanity. The campaign of 1644, proved at first favourable to the royal cause, though afterwards quite the reverse. The Irish forces were landed at Mostyn in North Wales, and put under the command of lord Byron. They besieged and took the castles of Hawarden, Beeston, Acton, and Deddington house. No place in Cheshire or the neighbourhood now adhered to the parliament, except Lantwich; and to this place Byron laid siege in the depth of winter. Sir Thomas Fairfax, alarmed at so great a progress, assembled an army of 4000 men in Yorkshire; and having joined Sir William Brereton, was approaching to the camp of the royalists. Byron and his soldiers, elated with their successes in Ireland, entertained a most profound contempt for their enemies. Fairfax suddenly attacked their camp. The swelling of the river by a thaw divided their army. That

part exposed to Fairfax, being beat from their post, retired into the church of Acton, where they were all taken prisoners. The other retreated with precipitation; and thus was dissipated the whole body of forces which had come from Ireland. This happened on the 25th of January; and on the 11th of April, Colonel Bellasis was totally defeated at Selby in Yorkshire, by Sir Thomas Fairfax, who had returned from Cheshire with his victorious forces. Being afterwards joined by lord Leven, the two generals sat down before York; but being unable to invest that city completely, they contented themselves with surrounding it by a loose blockade. Hopeton, having assembled a body of 14,000 men, endeavoured to break into Suffex, Kent, and the southern affrication, which seemed well disposed to receive him; but was defeated by Waller at Cherington. At Newark, however, prince Rupert totally defeated the parliamentary army which besieged that place; and thus preserved the communication open between the king's northern and southern quarters. The great advantages the parliament had gained in the north, seemed now to promise them complete success. Manchester having taken Lancaster, had united his army to that of Leven and Fairfax; and York was now closely besieged by their numerous forces. That town, though valiantly defended by the marquis of Newcastle, was reduced to the last extremity, when prince Rupert, having joined Sir Charles Lucas who commanded Newcastle's horse, hastened to its relief with an army of 20,000 men. The Scots and parliamentary generals raised the siege, and drew up on Marston moor. Prince Rupert approached the town by another quarter, and interposing the river Ouse between him and the enemy, he joined his forces to those of Newcastle. The marquis endeavoured to persuade him, that having so successfully effected his purpose, he ought to be contented with the present advantages, and leave the enemy, now much diminished by their losses, and discouraged by their ill success, to dissipate by those mutual dissensions which had begun to take place among them. The prince, however, hurried on by his natural impetuosity, gave immediate orders for fighting. The battle was lost, the royal army entirely pushed off the field, and the train of artillery taken. Immediately after this the marquis of Newcastle left the kingdom, and prince Rupert retired into Lancashire. York was surrendered in a few days, and Newcastle taken by storm. This was a fatal blow to the royal cause, and far from being balanced by an advantage gained at Cropredy bridge by the king over Waller, or even by the disarming of Essex's forces, which happened on the 1st of September. On the 27th October, another battle was fought at Newbury, in which the royalists were worsted, but soon after retrieved their honour at Denington castle, which finished the campaign of 1644. In 1645, a negotiation was again set on foot, and the commissioners met at Uxbridge on the 20th of January; but it was soon found impossible to come to any agreement. The demands of the parliament were exorbitant; and, what was worse, their commissioners owned them to be nothing but preliminaries. The king was required to attend

except from a general pardon, 40 of the most considerable of his English subjects, and 19 of his, together with all the popish recusants who bore arms for him. It was insisted that 48 re, with all the members of either house who sat in the parliament called by the king at Lord, all lawyers and divines who had embraced king's party, should be rendered incapable of office, be forbid the exercise of their profession, be prohibited from coming within the verge of the court, and forfeit the third of their estates in the parliament. It was required, that who had borne arms for the king should forfeit the third of their estates, or if that did not suffice, sixth, for the payment of public debts. It was also demanded that the court of wards should be dissolved; that all the considerable officers of crown, and all the judges, should be appointed by parliament; and that the right of peace and should not be exercised without consent of parliament. A little before the commencement of his fruitless treaty, the parliament, to show its determined resolution to proceed in the same way method in which they had begun, brought in the bill to block Abp. Laud, who had long been a prisoner in the tower. While the king's affairs went to ruin in England, they seemed to recede a little in Scotland, through the conduct and advice of the earl of Montrose, a young nobleman who returned from his travels. He had been introduced to the king; but not meeting with an agreeable reception, had gone over to the covenanters, and been active in forwarding all their measures. Being commissioned, however, by the king, to wait upon king Charles, while the army was at Berwick, he was so gained by the caresses of that monarch, that he thenceforth devoted himself entirely, though secretly, to his service. Attempting to form an association in favour of the royal cause, Montrose was quickly thrown into prison; but being again released, he found the king ready to give ear to his counsels, which were both bold and most daring kind. Though the king's nation of Scotland was occupied by the covenanters, though great armies were kept on foot in them, and every place guarded by a vigilant garrison, he undertook by his own credit, and that of the few friends to the king who remained, to raise such commotions, as would soon bring those malcontents to retaliate the forces which he so sensibly thrown the balance in favour of the king's government. The defeat at Marston-moor had given him no hopes of any succours from England; he was therefore obliged to stipulate with the earl of Argyll, a nobleman of Ireland, for some supply of men from that country. And he himself having used various disguises, and passed through many dangers, arrived in Scotland, where he lay some time concealed in the borders of the Lowlands. The Irish did not exceed 1100 foot, and were ill armed. Montrose immediately put himself at their head; and being joined by 1300 Highlanders, attacked lord Elcho, who lay at Perth with 6000 men, utterly defeated him, and killed 3000 of the covenanters. He next marched northwards, to rouse again the marquis of Huntly and the Gordons, who had taken arms before, but had been suppressed by the covenanters. At Aber-

deen, he attacked and entirely defeated lord Burrell, who commanded 2500 men. Montrose, however, by this victory, did not obtain the end he proposed; the marquis of Huntly showed no inclination to join an army where he was so much eclipsed by the general. Montrose was now in a very dangerous situation. Argyll, reinforced by the earl of Lothian, was behind him with a great army. The militia of the northern counties, Murray, Ross, and Caithness, to the number of 5000, opposed him in front, and guarded the banks of the Spey. In order to save his troops, he turned aside unto the hills; and after some marches and countermarches, Argyll came up with him at Faivy castle; and here, after some skirmishes, in which he was always victorious, Montrose got clear of a superior army, and, by a quick march through all these almost inaccessible mountains, put himself absolutely beyond their power. It was the misfortune of this general, that very good or very ill fortune were equally destructive of his army. After every victory his Scots soldiers went home to enjoy the spoil they had acquired; and had his army been composed of these only, he must have soon been abandoned altogether: but his Irishmen having no place to which they could retire, adhered to him in every fortune. With these, therefore, and some reinforcements of the Athol men and Macdonalds, Montrose fell suddenly upon Argyll's country, letting loose upon it all the horrors of war. Argyll, collecting 3000 men, marched in quest of the enemy, who had retired with their plunder; and he lay at Innerlochy, supposing himself to be still at a good distance from them. The earl of Seaforth, at the head of the garrison of Inverness, and a body of 5000 new levied troops, pressed the royalists on the other side, and threatened them with total destruction. By a quick and unexpected march, Montrose hastened to Innerlochy, and presented himself in order of battle before the covenanters. Argyll alone, seized with a panic, deserted his army. They made a vigorous resistance, however; but were at last defeated and pursued with great slaughter: after which Montrose was joined by great numbers of Highlanders; Seaforth's army dispersed of itself; and the lord Gordon, eldest son to the marquis of Huntly, having escaped from his uncle Argyll, who had hitherto detained him, now joined Montrose with a considerable number of his followers, attended by the earl of Aboyne. The council of Edinburgh, alarmed at these victories, sent for Baillie, an officer of reputation, from England; and, joining him in command with Urrey, sent them with a considerable army against the royalists. Montrose, with a detachment of 800 men, had attacked Dundee, a town extremely attached to the covenant; and having carried it by assault, had given it up to be plundered by his soldiers; when Baillie and Urrey with their whole forces came upon him. He instantly called off his soldiers from the plunder; put them in order; secured his retreat by the most skilful measures; and having marched 60 miles in the face of an enemy much superior, without stopping, or allowing his soldiers the least sleep or refreshment, at last secured himself in the mountains. His antagonists

now divided their forces, in order to carry on the war against an enemy, who surprised them as much by the rapidity of his marches, as by the boldness of his enterprises. Urrey met him with 4000 men, at Alderne near Inverness; and trusting to his superiority in numbers (for Montrose had only 2000 men), attacked him in the post which he had chosen. Montrose having placed his right wing in strong ground, drew the best of his forces to the other, and left no main body between them; a defect which he artfully concealed, by showing a few men through trees and bushes with which that ground was covered. That Urrey might have no leisure to perceive the stratagem, he instantly led his wing to the charge, made a furious attack on the covenanters, drove them off the field, and obtained a complete victory. Baillie now advanced, to revenge Urrey's defeat; but he himself met with a like fate at Alford. Montrose, weak in cavalry, lined his troops of horse with infantry; and after putting the enemy's horse to rout, fell with united force upon their foot, which were entirely cut in pieces, though with the loss of the gallant lord Gordon on the part of the royalists.—Having thus prevailed in so many battles, which his vigour always rendered as decisive as they were successful, he prepared for marching into the southern provinces, in order to put a total period to the power of the covenanters, and dissipate the parliament, which with great pomp and solemnity they had ordered to meet at St Johnstone's. While Montrose was thus signaling his valour in the north, Fairfax, or rather Oliver Cromwell under his name, employed himself in bringing in a new model into the parliamentary army, and throwing the whole troops into a different shape; and never surely was a more singular army established, than that which was now set on foot by parliament. To the greatest number of the regiments' chaplains were not appointed. The officers assumed the spiritual duty, and united it with their military functions. During the intervals of action, they occupied themselves in sermons, prayers, and exhortations. Rapturous ecstasies supplied the place of study and reflection; and while the zealous devotees poured out their thoughts in unpremeditated harangues, they mistook that eloquence, which to their own surprise, as well as that of others, flowed in upon them, for divine illuminations, and illapses of the Holy Spirit. Wherever they were quartered, they excluded the minister from his pulpit, and conveyed their sentiments to the audience with all the authority that followed their power, their valour, and their military exploits, united to their religious zeal and fervour. The private soldiers were seized with the same spirit; and in short, such an enthusiasm seized the whole army as was perhaps scarce ever equalled. The parliament had also greatly increased their popularity, by setting an example of disinterestedness in their own conduct; having passed an act, called the *self-denying ordinance*, "which, (says Dr Goldsmith) deserved all commendation;"—viz. that "no member of their house should have a command in the army." The royalists ridiculed the fanaticism of the parliamentary armies, without being sensible how much reason they had

to dread it. They were at this time equal, if not superior, in numbers to their enemies; but so conscientious, that they were become more formidable to their friends than their foes. The commanders were most of them men of dissolute character in the west more especially, where Goring commanded, universal spoil and havock were committed; and the whole country was laid waste by the rapine of the army; so that the most devoted friends both to the church and state wished for such success to the parliamentary forces, might put an end to these disorders. The consequence of such enthusiasm in the parliamentary army, and licentiousness in that of the king was, that equal numbers of the latter could no longer maintain their ground against the former. This appeared in the decisive battle of Naseby June 4th, 1645, where the forces were nearly equal; but after an obstinate engagement, Charles was entirely defeated; 500 of his officers and 4000 private men made prisoners: all his arms and ammunition taken, and his infantry totally dispersed; so that scarce any victory could be complete.

(48.) ENGLAND, HISTORY OF, UNTIL THE KING'S DELIVERY TO THE ENGLISH. Charles, after this battle, retired first to Hereford, then to Abergavenny; and remained some time in Wales, from the vain hope of raising a body of infantry in these quarters already harassed and exhausted. His affairs now, however went on in all quarters. Fairfax retook Leicester on the 17th of June. On the 10th of July, he raised the siege of Taunton; and the royalists retired to Lamport, an open town in the county of Somerset. Here they were attacked by Fairfax, and beat from their post, with the loss of 300 killed and 1400 taken prisoners. This was followed by the loss of Bridgewater, which Fairfax took the days after; making the garrison, to the number of 2,600 men, prisoners of war. He then reduced Bath and Sharnburn; and on the 11th Sept. Bristol was surrendered by prince Rupert, though a few days before he had boasted in a letter to Charles, that he would defend the place for six months. This so enraged the king, that he immediately recalled all the prince's commissions, and sent him a pass to go beyond sea. The Scots in the mean time, having made themselves masters of Carlisle after an obstinate siege, marched southwards and invested Hereford; but were obliged to raise the siege on the king's approach. And this was the last glimpse of success that attended his arms. Having marched to the relief of Chester, which was anew besieged by the parliamentary forces under colonel Jones, Hereford was attacked by Pointz, and an engagement immediately ensued. While the fight was continued with great obstinacy, and victory seemed to incline to the royalists, Jones fell upon them from the other side, and defeated them with the loss of 600 killed and 1000 taken prisoners. The king with the remains of his army fled to Newark, and from thence escaped to Oxford, where he shut himself up during the winter. After the surrender of Bristol, Fairfax and Cromwell having divided their forces, the former marched westwards to complete the conquest of Devonshire

Cornwall; the latter attacked the king's garrisons E. of Bristol. Nothing was able to stand before these victorious generals; every town was ordered to submit, and every body of troops that attempted to resist were utterly defeated. At last, it arrived that Montrose himself, after some successes, was defeated; and thus the last of the royal party was destroyed. When the brave general descended into the southern shires, the covenanters, assembling their whole force, met him with a numerous army, and gave him battle at Kilsyth. Here he obtained his most glorious victory: 6000 of the covenanters were slain on the spot, and no remains of an army were left in Scotland. Many noblemen, who formerly favoured the royal cause, now declared only for it, when they saw a force able to suppress them. The marquis of Douglas, the earls of Annandale and Hartfield, the lords Fleming, Maderty, Carnegie, with many others, joined to the royal standard. Edinburgh opened its gates, and gave liberty to all the prisoners there detained by the covenanters. Among the rest, lord Ogilvy, son to lord Airly, whose family contributed very much to the victory gained at Kilsyth.—David Leslie was detached from the army in England, and marched to the relief of the distressed party in Scotland. Montrose advanced still farther to the south, allured by the hopes, both of routing to arms the earls of Argyll, Traquair, and Roxburgh, who had promised to join him; and of obtaining from England a supply of cavalry, in which he was very deficient. By the negligence of his scouts, Leslie, Philiphaugh in the forest, surprised his army, diminished in numbers from the desertion of the Highlanders, who had retired to the hills, according to custom, to secure their plunder. In a sharp conflict, in which Montrose exerted all valour, his forces were routed by Leslie's army, and he himself forced to fly to the mountains. Nothing could be more affecting than the situation in which the king now was. He resolved to send the parliament their own terms, and sent repeated messages to this purpose, but they declined to make him any reply. At last, reproaching him with the blood spilt during the war, they told him that they were preparing bills, to which, if he would consent, they would then be able to judge of his pacific inclinations. Fairfax, in the mean time, was advancing with a victorious army to lay siege to Oxford; and Charles, rather than submit to be taken captive and led in triumph by his insupportable subjects, resolved to give himself up to the Scots, who had never testified such implacable animosity against him, and to trust to their mercy for the rest. After passing through many ways and cross-roads, he arrived in company with only two persons, Dr Hudson and Mr Ashmole, at the Scots camp before Newark, and delivered himself to lord Leven their general. The reception he met with was such as might be expected from a set of men more influenced by policy, than the principles of honour or humanity. Instead of endeavouring to alleviate the difficulties of their sovereign, they suffered him to be abused by the clergymen. They immediately

sent an account of his arrival to the English parliament, who entered into a treaty with them about delivering up their prisoner. The Scots thought this a proper time for the recovery of the arrears due to them by the English. A great deal was really due them, and they probably claimed more. At last, after various debates between them and the parliament, in which they insisted upon many punctilios, it was agreed, that, upon payment of £.400,000. the Scots should deliver up the king to his enemies; and this was cheerfully complied with. Thus the nation fell under the censure of having sold their king who had thrown himself upon their mercy. It must, however, be acknowledged, that the infamy of this bargain made by the army had such an influence on the Scots parliament, that they voted that the king should be protected and his liberty insisted on. But the general assembly interposed; and pronounced, that as he had refused to take the covenant which was pressed on him, it became not the godly to concern themselves about his fortune. In consequence of this, the parliament were obliged to retract their vote. The king, being delivered over to the English commissioners, was conducted under a guard to Holdenby in the county of Northampton, where he was very rigorously confined; his ancient servants being dismissed, himself debarred from visits, and all communication cut off with his family, and friends.

(49.) ENGLAND, HISTORY OF, UNTIL THE KING'S EXECUTION. The civil war being now over, the king absolved his followers from their allegiance, and the parliament had now no enemy to fear but their own troops. From this quarter their only danger arose; and they soon found themselves in the same unfortunate situation to which they had reduced the king. The majority of the house were Presbyterians, but the majority of the army were Independents. The former, soon after the retreat of the Scots, seeing every thing reduced to obedience, proposed to disband a considerable part of the army, and send the rest over to Ireland. This was by no means relished, and Cromwell took care to heighten the disaffection. Instead of preparing to disband, therefore, the soldiers resolved to petition; and they began by desiring an indemnity, ratified by the king, for any illegal actions which they might have committed during the war. The commons voted that this petition tended to introduce mutiny, &c. and threatened to proceed against the promoters of it as enemies to the state and disturbers of the public peace. The army now began to set up for themselves. In opposition to the parliament at Westminster, a military parliament was formed. The principal officers formed a council to represent the body of peers; the soldiers elected two men out of each company to represent the commons, and these were called the *agitators of the army*; and of this assembly Cromwell took care to be a member. The new parliament soon found many grievances to be redressed; and specified some of the most considerable. The commons were obliged to yield to every request, and the demands of the agitators rose in proportion. The commons accused the army of mutiny and sedition; the army retorted the charge, and alleged that

that the king had been deposed only to make way for their usurpations. Cromwell, in the mean time, who secretly conducted all the measures of the army, while he exclaimed against their violence, resolved to seize the king's person. Accordingly a party of 500 horse appeared at Holmby castle, under the command of one Joyce, originally a tailor, but now a cornet; and by this man was the king conducted to the army, who were hastening to their rendezvous at Triplo heath near Cambridge. Next day Cromwell arrived among them, where he was received with acclamations of joy, and immediately invested with the supreme command. The commons now saw the designs of the army; but it was too late, all resistance was become vain: Cromwell advanced with precipitation, and was in a few days at St Alban's. Even submission was now to no purpose; the army still rose in their demands, in proportion as these demands were gratified, till at last they claimed a right of modelling the whole government, and settling the nation. Cromwell began with accusing eleven members of the house, the very leaders of the presbyterian party, as guilty of high treason, and being enemies of the army. The commons were willing to protect them; but the army insisting on their dismissal, they voluntarily left the house. At last the citizens of London, finding the constitution totally overturned, and a military despotism beginning to take place, instead of the kingly one they were formerly afraid of, began to think seriously of repressing the insolence of the troops. The common council assembled the militia of the city; the works were manned; and a manifesto published, aggravating the hostile intentions of the army. Finding that the commons, in compliance with the request of the army, had voted that the city militia should be disbanded, the multitude rose, besieged the door of the house, and obliged them to reverse that vote they had so lately passed. The assembly was, of consequence, divided into two parties; the greater part siding with the citizens; but the minority, with the two speakers at their head, were for encouraging the army. Accordingly the two speakers, with 65 of the members, secretly retired from the house, and threw themselves under the protection of the army, who were then at Hounslow heath. They were received with shouts and acclamations; their integrity was extolled; and the whole force of the soldiery, to the number of 20,000 men, now moved forward to reinvade them in their places. In the meantime, the party of the house which was left, resolved to resist the encroachments of the army. They chose new speakers, gave orders for enlisting troops, ordered the trained bands to man the lines; and the whole city boldly resolved to resist the invasion. But this resolution only held while the enemy was at a distance; for when Cromwell appeared, all was obedience and submission: the gates were opened to the general, who attended the two speakers and the rest of the members peaceably to their habitations. The 11 impeached members being accused as causes of the tumult, were expelled; and most of them retired to the continent. The mayor, sheriff, and three aldermen, were sent to the tower; several citizens, and officers of the militia, were committed

to prison; the lines about the city levelled to the ground; and the command of the Tower was given to Fairfax. It now only remained to depose of the king, who remained a prisoner at Hampton Court. The independent army, at the head of whom was Cromwell, on one hand, and the presbyterians, in name of both houses, on the other, treated with him separately in private. He had sometimes even hopes, that, in these struggles for power, he might have been chosen mediator in the dispute; and he expected that the king, at last, being sensible of the miseries of anarchy, would of its own accord be hushed into its former tranquillity. At this time he was treated with some flattering marks of distinction; he was permitted to converse with his old servants; his chaplains were permitted to attend him, and celebrate divine service their own way. But the most exquisite pleasure he enjoyed was in the company of his children, with whom he had several interviews. The meeting on these occasions was pathetic, that Cromwell himself, who was ever present, could not help being moved, and he heard to declare, that he never beheld such affecting scenes before. But these instances of respect were of no long continuance. As soon as Cromwell had gained a complete victory over the house of commons, the king was treated not only with the greatest disrespect, but even kept in constant alarms for his own personal safety. The consequence of this was, that Charles at last resolved to withdraw from the kingdom. Accordingly, on the 11th Nov. 1647, attended only by Sir John Berkeley, Ashburnham, and Leg, he privately fled from Hampton Court; and his escape was not discovered till near an hour after; when those who searched his chamber, found on the table some letters directed to the parliament, to the general, and to the officer who had attended him. All night he travelled through the forest, and arrived next day at Titchfield, a seat of the earl of Southampton, where resided the countess dowager, a woman of honour, to whom the king knew he might safely entrust his person. Before he arrived at this place, he had gone to the sea coast; and expressed great anxiety that a ship which he looked for had not arrived. He could not hope to remain concealed at Titchfield: the question was, what measure should next be embraced? In the neighbourhood lay the Isle of Wight, of which Ashburnham was governor. This man was entirely dependent on Cromwell, which was a very unusual circumstance; yet, because the governor was nephew to Dr Hammond the king's favourite chaplain, and had acquired a good reputation in the army, it was thought proper to have recourse to him in the present exigence, when no other official expedient could be thought of. Ashburnham and Berkeley were dispatched to the place where the king lay concealed, till they first obtained a promise of him not to deliver up his majesty, even though the parliament and army should require him; but restore him to his throne if he could not protect him. The promise was given, but it was but a slender security; yet even without exacting it, Ashburnham imprudently, and carelessly, brought Hammond to Titchfield.

and the king was obliged to put himself into his hands, and to attend him to Carisbroke castle in the Isle of Wight, where, though he was received with great demonstrations of respect and kindness, he was in reality a prisoner. While the king continued in this forlorn situation, Cromwell found himself upon the point of losing all the fruits of his former schemes, by having his own principles armed against himself. Among the Independents, who in general were for no ecclesiastical subordination, a set of men grew up, called *LEVELLERS*, who disallowed all subordination whatsoever, and declared that they would have no other chaplain, ing, or captain, but Jesus Christ. Though this would have gone down very well with Cromwell, so long as it was only directed against his enemies, he did not so well relish it when applied to himself. Having intimation that the Levellers were to meet at a certain place, he unexpectedly appeared before them at the head of his red regiment, which had hitherto been deemed invincible. He demanded, in the name of God, what these meetings and murmurings meant? He expostulated with them upon the danger and consequence of their precipitant schemes, and desired them immediately to depart. Instead of obeying, however, they returned an insolent answer; wherefore, rushing on them in a fury, he laid two of them dead at his feet. His guards dispersing the rest, he caused several of them to be hanged upon the spot, and sent others to London; and thus diffused a faction, no otherwise criminal than in having followed his own example. Cromwell's authority was greatly increased by the last mention-
 action; but it became irresistible in consequence of a new and unexpected addition to his successes. The Scots, perhaps ashamed of the reproach of having sold their king, and stimulated farther by the Independents, who took all occasions to mortify them, raised an army in his favour, the command of which was given to the earl of Hamilton: while Langdale, who professed himself the head of the more bigotted party who had broken the covenant, marched at the head of his separate body, and both invaded the north of England. Though these two armies amounted to more than 20,000 men, yet Cromwell at the head of 300 of his hardy veterans, feared not to give them battle. He attacked them one after another; routed and dispersed them; took Hamilton prisoner; and, following the blow, entered Scotland, the government of which he settled entirely to his satisfaction. An insurrection in Kent was quelled by Fairfax with the same ease; and nothing but success attended all this usurper's attempts. During these contentions, the king, who was kept a prisoner at Carisbroke castle, continued to negotiate with the parliament for settling the unpeppable calamities of the kingdom. The parliament saw no other method of destroying the military power, but to depress it by the king's frequent proposals for an accommodation passed between the captive king and the commons; but he great obstacle which had all along stood in the way, still kept them from agreeing. This was the king's refusal to abolish episcopacy, though he consented to alter the liturgy. However, the

treaty was still carried on with vigour, and the parliament for the first time seemed in earnest to conclude their negotiations. But all was now too late. The victorious army, with Cromwell at their head, advanced to Windsor, and with furious remonstrances began to demand vengeance on the king. The unhappy monarch had been lately sent under confinement to that place; and from thence he was now conveyed to Hurst Castle in Hampshire, opposite to the Isle of Wight. The parliament in the mean time began to issue ordinances for an effectual opposition to these military encroachments, when they were astonished by a message from Cromwell, that he intended paying them a visit next day with his whole army; and in the mean time ordering them to raise him £40,000 on the city of London. The Commons, though destitute of all hopes of prevailing, had still the courage to resist, and to attempt, in the face of the whole army, to finish the treaty they had begun with the king. They had taken into consideration the whole of his concessions; and though they had formerly voted them unsatisfactory, they now renewed the consultation with great vigour. After a violent debate which lasted three days, it was carried in the king's favour by a majority of 129 against 83, that his concessions were a foundation for the houses to proceed upon in settling the affairs of the nation. This was the last attempt in his favour; for the next day colonel Pride, at the head of two regiments, blockaded the house; and seizing in the passage 41 members of the presbyterian party, sent them to a low room belonging to the house, that passed by the denomination of *Hell*. Above 160 members more were excluded; and none were allowed to enter but the most furious and determined of the Independents, in all not exceeding 60. This atrocious invasion of parliamentary rights commonly passed by the name of *Pride's purge*, and the remaining members were called the *Rump*. These soon voted, that the transactions of the house a few days before were entirely illegal, and that their general's conduct was just and necessary. Nothing remained, to complete the wickedness of this Rump parliament, but to murder the king. In this assembly, therefore, composed of the most obscure citizens, and officers of the army, a committee was appointed to bring in a charge against the king; and on their report, a vote passed declaring it treason in a king to levy war against his parliament. It was therefore resolved, that an high court of justice should be appointed, to try king Charles for this new invented treason. For form's sake, they desired the concurrence of the few remaining lords in the upper house; but there was virtue enough left in that body unanimously to reject the proposal. The commons, however, were not to be stopped by so small an obstacle. They voted that the concurrence of the house of lords was unnecessary, and that the people were the origin of all just power. To add to their zeal, a woman of Herefordshire, illuminated by prophetic visions, desired admittance, and communicated a revelation she pretended to have received from heaven. She assured them, that their measures were consecrated from above, and ratified

by the sanction of the Holy Ghost. This intelligence gave them great comfort, and much confirmed them in their present resolutions. Colonel Harrison, the son of a butcher, was commanded to conduct the king from Hurst Castle to Windsor, and from thence to London. His afflicted subjects, who ran to have a sight of their sovereign, were greatly affected at the change that appeared in his face and person. He had permitted his beard to grow; his hair was become venerably grey, rather by the pressure of anxiety than the hand of time; while the rest of his apparel bore the marks of misfortune and decay. He had long been attended by an old decrepit servant whose name was *Sir Philip Warwick*, who could only deplore his master's fate, without being able to revenge his cause. All the exterior symbols of sovereignty were now withdrawn, and his attendants had orders to serve him without ceremony. He could not, however, be persuaded that his adversaries would bring him to a formal trial; but he every moment expected to be dispatched by private assassination. From the 6th to the 20th of January was spent in making preparations for this extraordinary trial. The court of justice consisted of 133 persons named by the commons; but of these never above 70 met upon the trial. The members were chiefly composed of the principal officers of the army, most of them of very mean birth, together with some of the lower house, and a few citizens of London. Bradshaw, a lawyer, was chosen president; Coke was appointed solicitor for the people of England; Dorilaus, Steele, and Aske, were named assistants. The court sat in Westminster hall. When the king was brought forward before the court, he was conducted by the mace-bearer to a chair placed within the bar. Though long detained a prisoner, and now produced as a criminal, he still maintained the dignity of a king. His charge was then read by the solicitor, accusing him of having been the cause of all the bloodshed since the commencement of the war; after which Bradshaw directed his discourse to him, and told him that the court expected his answer. The king began his defence with declining the authority of the court. He represented, that having been engaged in treaty with his two houses of parliament, and having finished almost every article, he expected a different treatment from what he had now received. He perceived, he said, no appearance of an upper house, which was necessary to constitute a just tribunal. He insisted that he was himself the king and fountain of law, and consequently could not be tried, by laws to which he had never given his assent; that having been intrusted with the liberties of the people, he would not now betray them by recognizing a power founded in usurpation; that he was willing, before a proper tribunal, to enter into the particulars of his defence; but that before them he must decline any apology for his innocence, lest he should be considered as the betrayer of, and not a martyr for, the constitution. Bradshaw, in order to support the authority of the court, insisted, that they had received their authority from the people, the source of all right. He pressed the king not to decline the authority of the court, that was dele-

gated by the Commons of England, and interrupted and over-ruled him in his attempts to reply. In this manner the king was three times produced before the court, and as often persisted in declining its jurisdiction. The 4th and last time he was brought before this self-created tribunal, as he was proceeding thither, he was insulted by the soldiers and the mob, who cried out, "Justice! justice! Execution! execution!" but he continued undaunted. His judges having now examined some witnesses, by whom it was proved that the king had appeared in arms against the forces commissioned by parliament, they pronounced sentence against him. He seemed very anxious at this time to be admitted to a conference with the two houses, and it was supposed that he intended to resign the crown to his sons; but the court refused compliance, and considered his request as an artifice to delay justice. The behaviour of Charles under all these instances of low bred malice was great, firm, and equal. In going through the hall from this execrable tribunal, the soldiers and rabble were again incited to cry out, Justice and execution! They reviled him with the most bitter reproaches. Among other insults, one miscreant presumed to spit in the face of his sovereign. He patiently bore their insolence. "Poor souls (cried he), they would treat their generals in the same manner for sixpence." Those of the populace, who still retained the feelings of humanity, expressed their sorrow in sighs and tears. A soldier more compassionate than the rest could not help imploring a blessing on his royal head. An officer overhearing him, struck the honest sentinel to the ground before the king; who could not help saying, that the punishment exceeded the offence. At his return to Whitehall, Charles desired permission of the house to see his children, and to be attended in his private devotions by Dr Juxon, late bishop of London. These requests were granted, and 3 days allowed to prepare for execution. Every night between his sentence and execution, the king slept sound as usual, though the noise of the workmen employed in framing the scaffold continually resounded in his ears. The fatal morning being at last arrived, he rose early and calling one of his attendants, he had him employ more than usual care in dressing him, and preparing him for so great a solemnity. The street before Whitehall was the place destined for his execution; for it was intended that this should increase the severity of his punishment. He walked through the banquetting house to the scaffold, adjoining to that edifice, attended by his friend and servant, bishop Juxon, a man of the same mild and steady virtues with his master. The scaffold, which was covered with black, was guarded by a regiment of soldiers under the command of colonel Tomlinson; and on it were to be seen the block, the ax, and two executioners in masks. The people, in crowds, stood at a greater distance. The king surveyed all the solemn preparations with calm composure; and, as he could not expect to be heard by the people at a distance, he addressed himself to the few persons who stood round him. He there justified his own innocence in the late fatal wars: he observed, that he had not taken arms, till after the parliament had shown

in the example; and that he had no other object in his warlike preparations, but to preserve that authority entire, which had been transmitted to him by his ancestors. But, though innocent towards his people, he acknowledged the equity of his execution in the eyes of his Maker: he owned that he was justly punished for having consented to the execution of an unjust sentence against the earl of Strafford. He forgave all his enemies, exhorted the people to return to their obedience, and acknowledge his son as his successor; and testified his attachment to the Protestant religion as professed by the church of England. So strong was the impression made by his dying words on those who could hear him, that colonel Tomlinson himself, to whose care he had been committed, acknowledged himself a convert. At one blow his head was severed from his body. The other executioner then, holding up the head, exclaimed, "This is the head of a traitor." It is impossible to describe the grief, indignation, and astonishment, which took place, not only among the spectators, who were deeply affected, but throughout a great part of the nation, as soon as the report of this fatal execution was conveyed to them. Each blamed himself either with active disloyalty to the king, or a passive compliance with his destroyers. Many of those very pulpits that used to sound with insolence and sedition were now bedewed with tears of unfeigned repentance; and great numbers expressed their detestation of those rank hypocrites who, to satisfy their own ambition, involved the whole nation in the guilt of treason.—Charles was executed 52 minutes after 3 P.M. on the 30th January, 1649, in the 49th year of his age, and 24th of his reign. He was of middling stature, robust, and well proportioned. His visage was pleasant, but melancholy; and it is probable, that the continual troubles in which he was involved might have made that impression on his countenance. The king, the moment before he stretched out his neck to the executioner, said to Juxon, with a very earnest accent, the single word REMEMBER, great mysteries were supposed to be concealed under that word; and the generals vehemently insisted with the prelate, that he should inform them of the king's meaning. Juxon told them, that the king, having frequently charged him to inculcate on his son the forgiveness of his murderers, had taken this opportunity at the last moment of his life, when his commands, supposed, would be regarded as sacred and inviolable, to reiterate that desire; and that his mildness thus terminated its present course by an act of benevolence to his greatest enemies.

(50.) ENGLAND, HISTORY OF THE COMMONWEALTH OF, TILL THE BATTLE OF WORCESTER. The dissolution of the monarchy in England soon followed the death of the monarch. When the peers met on the day appointed in their journeyment, they entered upon business; and at down some votes to the commons, of which the latter designed not to take the least notice. On the 6th Feb. the commons voted, that the house of lords was "useless and dangerous, and the very office unnecessary and burdensome." They voted it high treason to acknowledge Charles Stuart, son of the late king, as successor to the throne.

A great seal was made; on one side of which were engraven the arms of England and Ireland, with this inscription, "The great seal of England." On the reverse was represented the House of Commons sitting, with this motto: "On the first year of freedom, by God's blessing restored, 1649." The forms of all public business were changed from being transacted in the king's name, to that of the *keepers of the liberties of England*. The court of King's Bench was called the court of *Public Bench*. The king's statue in the exchange was thrown down; and on the pedestal these words were inscribed: *Exit tyrannus, regum ultimus*; "The tyrant is gone, the last of the kings." The commons, it is said, intended to bind the princess Elizabeth apprentice to a button-maker; the duke of Gloucester was to be taught some other mechanical employment; but the former soon died of grief, as is supposed, for her father's tragical end; the latter was sent beyond sea by Cromwell. The commons next proceeded to punish those who had been most remarkable for their attachment to their late sovereign. The duke of Hamilton, lord Capel, and the earl of Holland, were condemned and executed; the earl of Norwich and Sir John Owen were also condemned, but afterwards pardoned. These proceedings irritated the Scots: their loyalty began to return; and the insolence of the Independents, with their victories, inflamed them still more. They determined, therefore, to acknowledge prince Charles for their king, but at the same time to abridge his power, by every limitation which they had attempted to impose on his father. Charles, after the death of his father, having passed some time at Paris, and finding no likelihood of assistance from that quarter, was glad to accept of any conditions. The Scots, however, while they were thus professing loyalty to their king, were nevertheless cruelly punishing his adherents. Among others, the brave marquis of Montrose was taken prisoner, as he endeavoured to raise the Highlanders in the royal cause; and being brought to Edinburgh, was hanged on a gibbet 30 feet high, then quartered, and his limbs stuck up in the principal towns of the kingdom. Yet, notwithstanding all this severity, Charles ventured into Scotland, where the limbs of that faithful adherent were still exposed. He soon found himself little better than a prisoner, being surrounded and incessantly importuned by the clergy, who having brought royalty under their feet, were resolved to keep it still subservient to their own purposes. Charles pretended to give ear to their discourses; but, however, made an attempt to escape. He was overtaken and brought back; when he acknowledged his fault, and testified his repentance for what he had done. Cromwell, in the mean time, who had been appointed by the parliament to command the army in Ireland, prosecuted the war in that kingdom with his usual success. He had to encounter the royalists commanded by the duke of Ormond, and the native Irish led on by O'Neal. These troops he quickly overcame; and most of the towns, intimidated by his successes, opened their gates at his approach. He was on the point of reducing the whole kingdom, when he was recalled by the parliament

liament to defend England against the Scots, who had raised a considerable army in support of the royal cause. On the return of Cromwell to England, he was chosen commander in chief of the parliamentary forces, in the room of Fairfax, who declined opposing the presbyterians. The new general immediately set forward for Scotland with an army of 16,000 men, where he was opposed by general Leslie, who formed an excellent plan for his own defence. This prudent commander, knowing his men to be inferior in valour and discipline, however superior in numbers, to those of Cromwell, kept himself carefully in his intrenchments. At last Cromwell was drawn into a very disadvantageous post near Dunbar, where his antagonist waited deliberately for him. From this imminent danger, however, he was delivered by the madness of the Scots clergy. They had been wrestling in prayer with the Lord night and day, and at last fancied that they had obtained the superiority. Revelations were made them, that the heretical army, together with *Agag* their general, would be delivered into their hands. Upon the assurances of these visions, they obliged their general to descend into the plain, and give the English battle, on the 3d Sept. 1650. When Cromwell saw this mad action, he assured his followers, that the Lord had delivered them into his hands, and ordered his army to sing psalms, as if already certain of victory. The Scots, though double the number of the English, were soon put to flight, and pursued with great slaughter, while Cromwell did not lose in all above 40 men. After this defeat, Charles put himself at the head of the remains of his army; and these he further strengthened by the royalists, who had been for some time excluded from his service by the covenanters. To strengthen the royal party still farther, Charles was solemnly crowned at Scone, on the 1st Jan. 1651. Cromwell, however, pursued the king's forces towards Perth, and by cutting off all supply of provisions, rendered it impossible for Charles to maintain his army. But Charles observing, that the way was open to England, immediately directed his march towards that country, where he expected to be reinforced by all the royalists in that part of the kingdom. In this, however, he was deceived: the English, terrified at the name of his opponent, dreaded to join him. But his mortification was greatly increased, when at Worcester he was informed, that Cromwell was marching with hasty strides from Scotland with an army of 40,000 men. This news was scarcely arrived, when Cromwell himself was there. On the 3d Sept. 1651, he fell upon the town on all sides; the whole Scots army were either killed or taken prisoners; and the king himself, having given many proofs of personal valour, was obliged to fly.

(51.) ENGLAND, HISTORY OF THE COMMONWEALTH OF, TILL THE USURPATION BY CROMWELL. After the battle of Worcester, Charles entered upon a series of the most romantic adventures. His hair being cut off, the better to disguise his person, he worked for some days in the habit of a peasant, cutting faggots in a wood. He next made an attempt to retire into Wales, under the conduct of one Pendrel, a poor farmer, who

was sincerely attached to his cause. In this attempt, however, he was disappointed; every path being guarded to prevent their escape. Being obliged to return, he met one colonel Carden, who had escaped the carnage at Worcester. In his company the king was obliged to climb a spreading oak; among the thick branches of which they spent the day together, while they heard the soldiers of the enemy in pursuit of them below. From thence he passed with imminent danger, feeling all the varieties of famine, fatigue, and pain, till he arrived at the house of colonel Lisle, a zealous royalist in Staffordshire. There he was liberated about the means of escaping into France, and Bristol being supposed the properest port, was resolved that he should ride thither before this gentleman's sister, on a visit to one Mrs Norton, who lived in the neighbourhood of that city. During this journey, he every day met with persons whose faces he knew, and at one time passed through a whole regiment of the enemy's army. When they arrived at Mrs Norton's, the first person they saw was one of his own chaplains. The king was shown to an apartment which Mrs Norton had provided for him, as it was said he had a plague. The butler, however, being sent to him with some refreshment, no sooner beheld his face, which was very pale with anxiety and fatigue, than he recollected his king and master; and falling on his knees, while the tears streamed down his cheeks, cried out, "I am rejoiced to see your majesty." The king was alarmed; but made the butler promise that he would keep the secret to every mortal; even from his master; and the next servant kept his word. No ship being found that would for a month set sail from Bristol, either for France or Spain, the king was obliged to seek elsewhere for a passage. He therefore repaired to the house of colonel Wyndham in Dorsetshire, where he was cordially received. His mother, a venerable matron, thought the end of her life nobly rewarded in having it in her power to give protection to her king, after having lost him; and one grandchild in the defence of his cause. Pursuing from thence his journey to the sea side, he once more had a very narrow escape at a fishing inn, where he set up for the night. The day he had been appointed for a solemn fast; and a famous weaver, who had been a soldier in the parliamentary army, was preaching against royalty in a little chapel fronting the house. Charles, to avoid suspicion, was himself among the audience. It happened that a smith, of the same principles with the weaver, had been examining the horses belonging to the passengers, and came to assure the preacher, that he knew by the fashion of the shoes, that one of the strangers horses came from the north. The preacher immediately affirmed, that this horse could belong to no other than Charles Stuart, and instantly went with a constable to search the inn. But Charles had taken timely precautions, and left the inn before the constable's arrival. At Shoreham, in Sussex, a vessel was at last found, in which he embarked. He was known to so many, that if he had not set sail at that critical moment, it had been impossible for him to escape. After 41 days concealment, he arrived safely at Feshamp in Normandy. No less than

men and women had at different times been rly to his escape. Cromwell in the mean time rmed in triumph; and his first care was to de- fi the Scots, on account of their having *with- d the work of the gospel* as he called it. An act passed for abolishing royalty in Scotland, and exing that kingdom as a conquered province he English commonwealth. It was empower- however, to send some members to the Eng- parliament. Judges were appointed to distri- e justice; and the people of that country, now d from the tyranny of the ecclesiastics, were much dissatisfied with the new government. parts of the British dominions being now red under perfect subjection to the parliament, next resolved to chastise the Dutch, who had n some slight causes of complaint. It happen- that Dr Dorilaus, who had been one of the king's judges, being sent by the parliament as r envoy to Holland, was assassinated by one of royal party who had taken refuge there. Some e after, Mr St John, their ambassador, was in- ed by the friends of the prince of Orange. e were thought sufficient reasons for a decla- of war against the Dutch by the common- lth of England. The parliament's chief de- dence lay in the activity and courage of Blake r admiral; who, though he had not embarked aval command till late in life, yet surpassed all t went before him in courage and dexterity. the other side, the Dutch opposed to him r famous admiral Van Tromp, to whom their ublic has never since produced an equal. Many e the engagements between these celebrated rials, and various was their success. Several ad'ul encounters served rather to show the ex- ecy of the admirals, than to determine their riority. At last the Dutch, who felt great dvantages by the loss of their trade, and by total suspension of their fisheries, were wil- to treat of a peace. The parliament, how- r, gave but a very unfavourable answer. They ked to keep their navy on foot as long as they lld; rightly judging, that while the force of the ion was exerted by sea, it would diminish the midable power of Cromwell by land. This at aspirer, however, quickly perceived their igns; and therefore, secure in the attachment the army, resolved to seize the sovereign power. persuaded the officers to present a petition for rment of arrears, and redress of grievances. rders were obeyed: a petition was drawn up l presented, in which the officers, after den- ding their arrears, desired the parliament to lder how many years they had sat, and what tensions they had formerly made of their de- ns to new-model the house, and establish free- ns on its broadest basis. They alleged, that it s now full time to give place to others; and never meritorious their actions might have n, yet the rest of the nation had some right, in r turn, to manifest their patriotism in defence their country. The house was highly offend- : they appointed a committee to prepare an , ordaining that all persons who presented such titions for the future should be deemed guilty high treason. To this the officers made a very remonstrance, and the parliament as angry

a reply. Cromwell, being informed of this alter- cation, started up in the utmost seeming fury, and turning to major Vernon, cried out, "that he was compelled to do a thing that made the very hair of his head stand on end." Then, hastening to the house with 300 soldiers, and with the marks of violent indignation on his countenance, he entered, took his place, and attended to the debates for some time. When the question was ready to be put, he suddenly started up, and began to load the parliament with the vilest reproaches for their tyranny, ambition, oppression, and robbery of the public. Upon which, stamping with his foot, which was the signal for the soldiers to enter, the place was immediately filled with armed men. Then, addressing himself to the members, "For shame, (said he,) get you gone. Give place to honest men; to those who will more faithfully discharge their trust. You are no longer a parliament; I tell you, you are no longer a parliament; the Lord has done with you." Sir Harry Vane exclaiming against his conduct, "Sir Harry! (cries Cromwell with a loud voice,) O Sir Harry Vane! The Lord deliver me from Sir Harry Vane!" Taking hold then of one of the members by his cloak, "Thou art a whoremaster," cries he; to another, "Thou art an adulterer;" to a third, "Thou art a drunkard;" to a fourth, "Thou art a glutton, &c." "It is you, (continued he to the members,) that have forced me upon this. I have fought the Lord night and day, that he would rather slay me than put me upon this work." Then pointing to the mace, "Take away that bauble," cried he, after which, turning out all the members, and clearing the hall, he ordered the doors to be locked; and putting the keys in his pocket, returned to Whitehall.

(52.) ENGLAND, HISTORY OF THE COMMON- WEALTH OF, UNDER OLIVER CROMWELL. Thus the whole civil and military power centered in Cromwell, who by this bold transaction became, in effect, king of Great Britain, with uncontrollable authority. Being willing, however, to amuse the people with the form of a commonwealth, he proposed to give his subjects a parliament; but such an one as should be altogether obedient to his commands. For this purpose it was decreed, that the sovereign power should be vested in 144 persons, under the denomination of a parliament; and he undertook to make the choice himself. The persons pitched upon were the lowest and most ignorant among the citizens, and the very dregs of the fanatics. To go further than others in the absurdities of fanaticism was the chief qualification upon which each of these valued himself. Their very names, borrowed from scripture, and rendered ridiculous by their misapplication, served to show their excess of folly. From one of them particularly, called *Praise-God Barebones*, a canting leather-seller, this odd assembly got the name of *Barebones' Parliament*. They were chiefly composed of Antinomians; a sect who, after receiving the spirit, supposed themselves incapable of error; and of Fifth-monarchy men, who every hour expected Christ's second coming on earth. They began by choosing eight of their tribe to seek the Lord in prayer, while the rest calmly sat down to deliberate upon the suppression of the clergy, the universities,

universities, and courts of justice; instead of all which it was their intent to substitute the law of Moses. It was impossible such a legislature as this could stand; even the vulgar began to exclaim against it, and Cromwell himself to be ashamed of their absurdities. He had carefully chosen many persons among them who were entirely devoted to his interests, and these he commanded to dismiss the assembly. These accordingly met by concert earlier than the rest; and observing to each other, that this parliament had sat long enough, they hastened to Cromwell, with Rouse their speaker at their head, and into his hands resigned the authority with which he had invested them. Cromwell accepted their resignation with pleasure; but being told that some of their number were refractory, he sent colonel White to clear the house. They had placed one Moyer in the chair by the time that the colonel had arrived; and he being asked by the colonel, What they did there? Moyer replied very gravely, That they were seeking the Lord. "Then you may go elsewhere (cried White); for, to my certain knowledge, the Lord hath not been here these many years." The shadow of a parliament being thus dissolved, the officers, by their own authority, declared Cromwell protector of the commonwealth of England. The mayor and aldermen were sent for, to give solemnity to his appointment, and he was instituted into his new office at Whitehall, in the royal palace. He was to be addressed by the title of *Highness*; and his power was proclaimed in London, and other principal cities. It seemed now, indeed, in a great measure necessary that some person should take the supreme command; for affairs were brought into such a situation, by the furious animosities of the contending parties, that nothing but absolute power could prevent a renewal of former bloodshed and confusion. The government of the kingdom was adjusted in the following manner. A council was appointed, which was not to exceed 21, nor to be under 13 persons. These were to enjoy their offices for life, or during good behaviour; and, in case of a vacancy, the remaining members named three, of whom the protector chose one. The protector was appointed the supreme magistrate of the commonwealth, with such powers as the king had possessed. The power of the sword was vested in him jointly with the parliament when sitting, or with the council at other times. He was obliged to summon a parliament once every 3 years, and to allow them to sit 5 months without adjournment. A standing army was established of 20,000 foot and 10,000 horse; and funds were assigned for their support. The protector enjoyed his office for life; and on his death, his place was to be supplied by the council. Of all these clauses the standing army was sufficient for Cromwell's purpose; for, while possessed of that instrument, he could mould the rest of the constitution to his pleasure at any time. He chose his council from among his officers, who had been the companions of his dangers and victories, to each of whom he assigned a pension of 1000*l.* a year. He took care to have his troops, upon whose fidelity he depended for support, paid a whole in advance; the magazines were also well provided, and the pub-

lic treasure managed with frugality and care, while his activity, vigilance, and resolution, was so well exerted, that he discovered every conspiracy against his person, and every plot for a resurrection, before they took effect. Thus Cromwell continued to govern the commonwealth without the title of *King*, in as absolute a manner as the most despotic prince in Europe. As he was feared at home, so he made himself respected abroad. The Dutch, having been humbled by repeated defeats, were forced to sue for peace. Cromwell obliged them to pay deference to the British flag. He compelled them to abandon the interests of the king's son, to pay 85,000*l.* and indemnification for former expenses, and to restore to the English East India company a part of those dominions, which they had been dispossessed of by the Dutch, during the former reign. The ministry of France paid the utmost deference to the protector; and having lent that court a body of 6000 men to attack the Spanish dominions in the Netherlands, who obtained a signal victory, the French put Dunkirk into his hands as a reward for his attachment. By the heroic exertions of the celebrated admiral Blake, he humbled the prodigiously; as well as the Algerines and Tunisians. (See *BLAKE*, N° 2.) Penn and Venables two other admirals, made an attempt on the island of Hispaniola; but failing of this, they receded to JAMAICA, which was surrendered to them without a blow. Yet so little was thought of the importance of this conquest, that, on their return, the two admirals were committed to the tower on account of the failure of the principal objects of their equipment. It is not to be supposed, that a numerous standing army could be maintained, and so many foreign wars carried on, without incurring extraordinary expences. The protector's revenues were so much exhausted, that he was obliged to have recourse to methods which he probably would not have chosen, had he not been driven to them by necessity. One or two conspiracies entered into by the royalists, which were detected and punished, served him as a pretext to lay a heavy tax upon all that party, of the tenth penny on all their possessions. To raise this oppressive imposition, ten major-generals were constituted, who divided the whole kingdom into ten military jurisdictions. These men had power to subject whom they pleased to this tax, and to imprison such as denied their jurisdiction. Under these powers they exercised the most arbitrary authority; the very mask of liberty was thrown off, and all property was at the disposal of a military tribunal. In vain the nation cried out for a parliament. Cromwell assembled one in consequence of their clamours; but as speedily dissolved it, when he found it refractory. At last he resolved to give them one, but such as should be entirely of his own choosing, and chiefly composed of his creatures. Left any of a different complexion should enter the house, guards were placed at the door, and none admitted but such as produced a warrant from his council. The principal design of convening this assembly was, that they should offer him the crown, with the title of *King*, and all the other ensigns of royalty. His creatures, therefore, took care to insinuate the con-

in there was in legal proceedings without the use of a king; that no man was acquainted with the extent or limits of the present magistrate's authority, but those of a king had been well ascertained by the experience of ages. The motion was at last formally made in the house, easily carried through, and nothing was wanting but Cromwell's own consent to have his name enrolled among the kings of England. This consent, however, he never would give. The conference carried on with the members, who made him the offer seems to argue that he was desirous of being compelled to accept it, but it ended in his total refusal. With all these proffered honours, and with all his despotic power, the situation of Cromwell was far from being enviable. Perhaps no situation, however mean, could be more truly disastrous, at the very time the nation was loading him with congratulations. He had at last rendered himself hateful to every party, and he owed safety to their mutual hatred and diffidence of another. His arts of dissimulation were exhausted; none could be deceived by them; even those of his own party and principles disdaining the use to which he had converted his zeal and passions. Though the nation silently detested his administration, he had not been completely rejected, if he could have found domestic consolation. But even his own family had embraced republican principles with so much vehemence, they could not without indignation behold invested with uncontrollable power; and Claypole, his favourite daughter, upbraided him, on her death-bed, with his crimes. To add to this, not only were conspiracies formed against him, but he was at last taught, upon reasoning principles, that his death was not only desirable, but his assassination would be meritorious. This was published by colonel Titus, who had lately been attached to his cause, entitled *Killing a Murderer*. Of all the pamphlets that appeared at that time, this was the most masterly. Cromwell read it, and is said never to have smiled afterwards. He now found, that the grandeur to which he had sacrificed his former tranquillity, was only an inlet to fresh inquietudes. He was vexed with perpetual fears of assassination. He kept his armour under his clothes, and always kept pistols in his pockets. His aspect was clouded by a gloom, and he regarded every stranger with suspicion. He was always attended by a numerous guard, and travelled in a hurry. He never returned from any place by the road he went; he never slept above three nights together in the same chamber. At last he was delivered from this horror and anxiety by a tertian ague, of which he died Sept. 3, 1658, after having usurped the government 9 years. For the character of this extraordinary man, see CROMWELL, N° 1.

3. ENGLAND, HISTORY OF THE COMMONWEALTH OF, UNDER RICHARD CROMWELL. After Cromwell was succeeded in his office of protector by his son Richard, who immediately called a parliament. To this assembly the army presented a remonstrance, desiring some person for general in whom they could confide. They requested such meetings and remonstrances until: upon which the officers, surrounding

Richard's house, forced him to dissolve the parliament; and soon after he signed an abdication of the government. His younger brother Henry, who had been appointed to the command in Ireland, followed Richard's example, and resigned his commission without striking a blow.

(54.) ENGLAND, HISTORY OF THE COMMONWEALTH OF, UNTIL THE RESTORATION OF MONARCHY. The officers, thus left at liberty, resolved to restore the RUMP PARLIAMENT, as it was called, consisting of that remnant of a parliament which had condemned Charles. They were no sooner reinstalled in their authority, however, than they began to humble the army by cashiering some of the officers, and appointing others on whom they could have more dependence. The officers at last resolved to dissolve the assembly. Lambert, one of the generals, drew up a chosen body of troops; and placing them in the streets which led to Westminster hall, when the speaker Lenthall proceeded in his carriage to the house, he ordered the horses to be turned, and very civilly conducted him home. The other members were likewise intercepted; and the army returned to their quarters to observe a solemn fast, which generally either preceded or attended their outrages. A committee was then elected, of 23 persons, of whom 7 were officers. These they pretended to invest with sovereign authority; and a military government was established, which gave the nation a prospect of endless tyranny without redress. Upon hearing that the officers had by their own authority dissolved the parliament, general Monk, who was then in Scotland with 8000 veteran troops, protested against the measure, and resolved to defend the national privileges. As soon as he put his army in motion, he found himself eagerly fought after by all parties; but so cautious was he of declaring his mind, that, to the very last, it was impossible to know which side he designed to take. A remarkable instance of this cautious behaviour was, that, when his own brother came to him, with a message from lord Granville in the name of the king, he refused all conversation with him, upon hearing that he had told his errand to Mr Price, the general's own chaplain, and a man of known probity and honour. Hearing that the officers were preparing an army to oppose him, Monk amused them with negotiations; and the people, finding themselves not entirely defenceless, began to declare for a free parliament. The Rump, finding themselves invited also by the navy and part of the army, again ventured to resume their seats, and to thunder votes in their turn, against the officers, and that party of the army by which they had been ejected. Without taking any notice of Lambert, they sent orders to the troops to repair immediately to the garrisons appointed for them. The soldiers obeyed; and Lambert at last found himself deserted by his whole army. Monk, in the mean time, proceeded with his army to London. The gentry, on his march, flocked round him with addresses, expressing their desire of a new parliament; but that general, still continuing his inflexible taciturnity, at last came to St Albans, within a few miles of the capital, leaving all the world in doubt as to his motives and designs. Here he sent the parliament

liament a message, desiring them to remove such forces as remained in London to country quarters. Some of the regiments willingly obeyed this order; and such as did not, Monk turned out by force: after which he took up his quarters with his army in Westminster. The house voted him thanks for his services: he desired them to call a free parliament; and this soon led the citizens to refuse submission to the existing government. They resolved to pay no taxes until the members formerly excluded by colonel Pride should be replaced. For this they were punished by Monk, at the desire of the parliament. He arrested 11 of the most obnoxious of the common council; broke the gates and portcullises; and, having exposed the city to the scorn and contempt of all who hated it, he returned in triumph to his quarters at Westminster. The next day, however, he made an apology for this conduct, and promised for the future to co-operate with the mayor and common council in such schemes as they should approve. The commons were now greatly alarmed. They tried every method to gain off the general from his new alliance. Some of them even promised to invest him with the dignity of supreme magistrate, and to support his usurpation. But Monk was too just, or too wise, to hearken to such wild proposals; he resolved to restore the secluded members, and by their means to bring about a new election. The restoration of the expelled members was easily effected; and their number was so much superior to that of the *Rump*, that the chiefs of this last party now thought proper to withdraw in their turn. The restored members began with repealing all those orders by which they had been expelled. They renewed and enlarged the general's commission; fixed a proper stipend for the support of the fleet and army; and, having passed these votes, they dissolved themselves, and gave orders for the immediate assembling a new parliament. Mean while, Monk remodelled his army to the purposes he had in view. Some officers, by his direction, presented him with an address, in which they promised to obey implicitly the orders of the ensuing parliament. He approved of this engagement, which he ordered to be signed by all the different regiments; and this furnished him with a pretence for dismissing all the officers by whom it was rejected. In the midst of these transactions, Lambert, who had been confined in the Tower, escaped from his prison, and began to raise forces; and as his activity and principles were well known, Monk took the earliest precautions to oppose his measures. He dispatched against him colonel Ingoldsbys, with his own regiment, before Lambert had time to assemble his dependents. That officer had taken possession of Daventry with 4 troops of horse: but the greater part of them joined Ingoldsbys; to whom he himself surrendered, not without exhibiting strong marks of pusillanimity. All this time Monk still persisted in his reserve; nor would he intrust his secret intentions with any person, except one Morrice, a gentleman of Devonshire. He was of a sedentary and studious disposition; and with him alone did the general deliberate on the great and dangerous enterprise of the restoration. Sir John Granville, who had a commission

from the king, applied for access to the general but he was desired to communicate his business to Morrice. Granville refused, though twice asked, to deliver his message to any but the general himself: so that Monk, now finding he could depend on this minister's secrecy, opened to him his whole intentions; but, with his usual caution, refused to commit any thing to paper. In consequence of these, the king left the Spanish territories, where he very narrowly escaped being detained at Breda by the governor, under pretence of treating him with proper respect and formality. From thence he retired to Holland, where he resolved to wait further advice. The new parliament being assembled, Sir Harbottle Grimston was chosen speaker, a man known to be a royalist at his heart. The affections of all were turned towards the king; yet such were their fears, and such dangers attended a freedom of speech that one dared for some time to make mention of his name. At length Monk gave directions to Anne, president of the council, to inform them, that Sir John Granville, a servant of the king's, had been sent over by his majesty, and was now at door with a letter to the house of commons. This message was received with the utmost joy. Granville was called in, the letter read, and the king's proposals immediately accepted of. He offered a general amnesty to all persons whatsoever, and that without any exceptions, but what should be made by parliament. He promised to satisfy scrupulous consciences, with liberty in matters of religion; to leave to the examination of parliament the claims of all such as possessed lands of contested titles; to confirm all these concessions by act of parliament; to satisfy the army and general Monk with respect to their arrears, and to give the same rank to his officers when they should be enlisted in the king's army. In consequence of this agreement between the king and parliament, Montague the English admiral sailed on king Charles, to inform him that the fleet expected his orders at Scheveling. The duke of York immediately went on board, and took command as lord high admiral. The king embarked, and landing at Dover, was received by the general, whom he tenderly embraced. He entered London in 1660, on the 29th of May, which was his birth-day; and was attended by innumerable multitude of people, who testified their joy by the loudest acclamations.

(55.) ENGLAND, HISTORY OF, TILL THE DUTCH WAR, UNDER K. CHARLES II. Charles II. was 30 years of age at the restoration. He was naturally of an engaging countenance, and possessed of an open and affable disposition, he became the favourite of all ranks of his subjects. They had felt the miseries of anarchy, and in proportion to these was their satisfaction on the accession of the young monarch. His first measures were calculated to give universal satisfaction. He seemed desirous of losing the memory of party animosities, and of uniting every party in affection for their prince and country. He admitted into his council the most eminent men of the nation without regard to former distinctions. The presbyterians shared this honour equally with the royalists. Calamy and Baxter, presbyterian clergy

men, were even made chaplains to the king. Admiral Montague was created earl of Sandwich, and general Monk duke of Albemarle. Morrice, a general's friend, was appointed a secretary of state. But what gave the greatest satisfaction to the nation, was the judicious choice which the king first made of his principal ministers. Sir Edward Hyde, created earl of Clarendon, was prime minister and chancellor; the marquis, created earl of Ormond, was steward of the household; the earl of Southampton high treasurer; Sir Edward Nicholas secretary of state. These men, united together in the strictest friendship, and combining in the same laudable inclinations, supported each others credit, and pursued the interests of the public. The parliament having been summoned without the king's consent, received at first the title of a CONVENTION; and it was not after an act passed for that purpose, that they were acknowledged by the name of PARLIAMENT. The houses owned the guilt of the former rebellion, and gratefully received in their own name, in that of all the subjects, his majesty's gracious pardon and indemnity. The king had before promised an indemnity to all criminals, but he should be excepted by parliament: he then issued a proclamation, declaring, that such of the late king's judges as did not surrender themselves within 14 days should receive no pardon. Nineteen surrendered; some were taken in their flight; others escaped beyond sea. The peers seemed inclined to great severity on this occasion; but were restrained by the king, who in the most lenient terms pressed the act of general indemnity. After repeated solicitations, the act of indemnity passed both houses, with the exception of those who had an immediate hand in the king's death. Sir Cromwell, Ireton, and Bradshaw, though dead, were considered as proper objects of resentment: their bodies were dug from their graves; dragged to the place of execution; and, after lying some time, buried under the gallows. The rest who sat in judgment on the late monarch's trial, some were dead, and some thought worthy of pardon. Ten only, out of 80, were doomed to immediate destruction; and these were husbandmen who had all along acted from principle, and who, in the general spirit of rage excited against them, showed a fortitude that would do honour to any cause. This was all the aid that was shed at the restoration. The rest the king's judges were reprimanded, and afterwards dispersed into several prisons. The army disbanded, that had for so many years governed the nation; prelacy, tithes, and all the emoluments of the church of England, were re-established; at the same time that the king pretended to preserve the air of moderation and neutrality. In fact, with regard to religion, Charles in his earlier hours, was a professed deist; but in the latter part of his life he showed an inclination to Catholic persuasion, which he had imbibed in infancy and exile. On the 13th Sept. died the young duke of Gloucester, a prince of great merit. The king was never so deeply affected by any incident in his life. The prince of Orange, having come to England to partake of the joy at-
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tending the restoration of her family, with whom she lived in great friendship, soon after sickened and died. The queen mother paid a visit to her son, and obtained his consent to the marriage of princess Henrietta with the duke of Orleans, brother to the French king. The parliament having met on the 6th November, and carried on business with the greatest unanimity and dispatch, were dissolved by the king on the 29th December 1660. During the reign of Charles II. the spirit of the people took a turn quite opposite to that in the time of Charles I. The latter found his subjects animated with a ferocious though ignorant zeal for liberty. They knew not what it was to be free, and therefore imagined that liberty consisted in throwing off entirely the royal authority. They gained their point: the unhappy monarch was dethroned and murdered; but instead of liberty, they found themselves involved in greater tyranny than before. Being freed from this tyranny by the restoration, they ran into the contrary extremes; and instead of an unbounded spirit of opposition, there was nothing now to be found but as unbounded a spirit of submission; and through the slavish submissions and concessions of the people in this reign, Charles rendered himself at last almost quite absolute, and governed without requiring, or indeed having any occasion for a parliament. A revolution equally great took place with regard to religious matters. During the former reigns a spirit of the most gloomy enthusiasm had overspread the whole island, and men imagined that the Deity was only to be pleased by their denying themselves every social pleasure, and refusing every thing that tended to make life agreeable. The extreme hypocrisy of Cromwell and his associates, and the absurd conduct of others, showed that this was not religion; but, in avoiding this error, they ran into one equally dangerous; and every thing religious or serious was discountenanced. Nothing but riot and dissipation took place every where. The court set the example; nothing but scenes of gallantry and festivity were to be seen; the horrors of the late war became the subject of ridicule; the formality of the sectaries was displayed on the stage, and even laughed at from the pulpit. In short, the best mode of religion now was to have as little as possible; and to lay aside not only the enthusiasm of the sectaries, but even the common duties of morality. In the midst of this riot and dissipation, the old and faithful adherents of the royal family were left unrewarded. Numbers who had fought both for the king and his father, and who had lost their whole fortunes in his service, still continued to pine in want and oblivion; while in the mean time their persecutors, who had acquired fortunes during the civil war, were permitted to enjoy them without molestation. The wretched royalists petitioned and murmured in vain; the monarch fled from their expostulations to scenes of mirth and festivity; and the act of indemnity was justly said to have been an act of *forgiveness* to the king's enemies, and of *oblivion* to his friends. In 1661, the Scots and English parliaments seemed to vie with each other in their prostrations to the king. In England, monarchy
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and episcopacy were raised to the greatest splendor. The bishops were permitted to resume their seats in the house of peers; all military authority was acknowledged to be vested in the king. He was empowered to appoint commissioners for regulating corporations, and expelling such members as had intruded themselves by violence, or professed principles dangerous to the constitution. An act of uniformity was passed, by which it was required, that every clergyman should be re-ordained, if he had not before received episcopal ordination; that he should declare his assent to every thing contained in the book of Common prayer, and should take the oath of canonical obedience. In consequence of this law, above 2000 of the presbyterian clergy resigned their cures at once. In Scotland the right of the king was asserted in the fullest and most positive terms to be hereditary, divine, and indefeasible. His power was extended to the lives and possessions of his subjects, and from his original grant was said to come all that they enjoyed. They voted him an additional revenue of £40,000; and all their former violences were treated with a degree of the utmost detestation. This intoxication of loyalty, however, began soon to wear off. The king's profusion and extravagance in his pleasures, together with his indolence in government, furnished opportunities of making very disadvantageous comparisons between him and Oliver Cromwell. These animosities were heightened by the ejected clergy, especially when they saw Dunkirk, which had been acquired during the usurper's vigorous administration, sold to the French for £40,000, and that merely to supply the king's extravagance. From this time (August 17th 1662), Charles found himself perpetually opposed, and his parliaments granted supplies much more reluctantly than before. A few months before, the continual exigencies of the king had forced him to conclude a marriage with the Infanta of Portugal for the sake of her portion, which was £500,000 in money, together with the fortrefs of Tangier in Africa, and Bombay in the East Indies. The chancellor Clarendon, the dukes of Ormond and Southampton, urged many reasons against this match, particularly the likelihood of her never having any children; but all their objections could not prevail, and therefore Clarendon set himself to promote it as far as it lay in his power. Still, however, the king's necessities were greater than his supplies. He therefore resolved to sacrifice his minister, the great Clarendon, to the resentment of the parliament, to whom he was become obnoxious, in order to procure some more supplies to himself. In 1663, an extraordinary supply was demanded; the king sent for the commons on the 14th of June, to Whitehall. He complained of their inattention; and by acquainting them of a conspiracy to seize the castle of Dublin, he hoped to furnish a reason for demanding a present supply. Four subsidies were immediately granted, and the clergy in convocation followed the example of the commons. On this occasion the E. of Bristol ventured to impeach the chancellor in the house of peers; but as he did not support his charge, the affair was dropped for the present. With a view probably of having the money to be

employed for that purpose in his hands, Charles was induced to declare war against the Dutch in 1664.

(56.) ENGLAND, HISTORY OF, TILL THE END OF THE WARS WITH THE DUTCH. In this war the English, under the command of Sir Robert Holmes, expelled the Dutch from Cape Corse castle on the coast of Africa, and seized on their settlements of Cape Verd and the isle of Gorre. Sailing from thence to America, the admiral possessed himself of *Nova Belgia*, since called *New York*; and which continued subject to Britain till the American revolution. On the other hand, De Ruyter, the great Dutch admiral, dispossessed the English of all their settlements in Guinea except Cape Corse. He afterwards sailed to America, where he attacked Barbadoes and Long Island, but was repulsed. Soon after, the two most considerable fleets of each nation met; the one under the duke of York, to the number of 114 sail; the other commanded by Opdam admiral of the Dutch navy, of nearly equal force. The engagement began at four in the morning, and both sides fought with equal intrepidity. The duke of York was in the hottest part of the engagement, and behaved with great spirit, with many of his lords and attendants were killed beside him. In the heat of the action the Dutch admiral's ship blew up; which so discouraged and disheartened them, that they fled towards their own coast, having 30 ships sunk and taken, with the victors lost only one. This success so much excited the jealousy of the neighbouring states, that France and Denmark immediately resolved to protect the Dutch republic from such formidable enemies. Adm. De Ruyter, on his return from Guinea, was appointed, at the head of 26 sail, to join the duke of Beaufort the French admiral, who it was supposed was then entering the British channel from Toulon. The duke of Albemarle and prince Rupert now commanded the British fleet, which did not exceed 74 sail. Albemarle detached prince Rupert with 20 ships to oppose the duke of Beaufort; against which party of rashness Sir George Ayscough protested in vain. The fleets thus engaging upon unequal terms, a most memorable battle ensued. The first day the Dutch admiral Everten was killed by a cannon ball, one of their ships was blown up, and three of the English ships taken. The combat was parted by darkness. The 2d day they renewed the battle with incredible fury. Sixteen fresh ships joined the Dutch; and the English were so shattered, that their fighting ships were reduced to 28. Upon retreating towards their own coast the Dutch followed them; where another dreadful conflict was beginning, but again parted by the darkness of the night. The morning of the 3d day the English continued their retreat, and the Dutch their pursuit. Albemarle came to the desperate resolution of blowing up his own ship rather than submit to the enemy, when he found himself happily reinforced by prince Rupert with 13 ships of the line. By this time it was night; and the next day the fleets came again to a close combat, which was continued with great violence, till they were parted by a mist. Sir George Ayscough having the misfortune to strike on the G.

oper sands, was taken, with a ship of 100 guns. Both sides claimed the victory, but the Dutch certainly had the advantage. A sea fight, however, equally bloody, happened soon after, with larger fleets on both sides, commanded by the same admirals. In this the Dutch were vanquished; but they were soon in a condition to attack their enemies, by the junction of Beaufort the French admiral. The Dutch fleet appeared in the Thames, conducted by their great admiral. The English were thrown into the utmost consternation: a chain had been drawn across the river midway; and some fortifications had been added to the forts along the bank. But all these were unequal to the present force: Sheerness was soon taken; the Dutch passed forward and broke the chain, though fortified by some ships sunk by Alenmarle's orders, destroying the shipping in their passage, they still advanced, with six men of war and five fire ships, as far as Upnore castle, where they burned three men of war. The whole city of London was in a consternation; it was expected that the Dutch might sail up next tide to London bridge, and destroy not only the shipping, but even the buildings of the metropolis. The Dutch, however, were unable to prosecute that project, from the failure of the French, who had promised them assistance. Spreading therefore an alarm along the coast, and having insulted Norwich, they returned to their own coast. During these transactions, there happened a great plague in London, which destroyed 100,000 of the inhabitants. This calamity was soon followed by another, still more dreadful if possible. A fire broke out in a baker's house in Pudding lane near the bridge, and spread with such rapidity, that no efforts could extinguish it, till it laid in ashes the most considerable part of the city. This calamity, though it reduced thousands to beggary, proved in the end both beneficial and ornamental to the city. It rose from its ruins in greater beauty than ever; the streets being widened, and the houses built of brick instead of wood, became thus more wholesome and secure. In so great a calamity, it is remarkable, that not a single life was lost. These complicated misfortunes did not fail to excite many murmurs among the people: the blame of the fire was laid on the Papists: the Dutch war was exclaimed against as unsuccessful and unnecessary, as being an attempt to humble that nation who were equal enemies to popery with themselves. Charles himself also began to be sensible, that all the ends for which he had undertaken the Dutch war were likely to be entirely frustrated. Instead of being able to lay up money for himself, the supplies of parliament had hitherto been so scanty, that he found himself considerably in debt. A treaty therefore was set on foot, which was concluded at Breda on the 21st of July, 1667. By this treaty the only advantage gained by Britain was, the cession of the colony of New York. It was therefore judged disgraceful, and the blame of it thrown upon the unhappy earl of Clarendon. Along with this, he was charged with the sale of Dunkirk; the bad payment of the seamen; the disgrace by the Dutch fleet; and his own ambition. His daughter, while yet in Paris, had commenced an amour with the

duke of York; and under a solemn promise of marriage had admitted him to her bed. Her lover, however, afterwards married her; but this act of virtue in the prince was imputed as a crime to Clarendon. On these accusations, the king, who, on account of his rigid virtue, had never much loved this nobleman, ordered the seals to be taken from him, and given to Sir Orlando Bridgeman. Clarendon was again impeached; and though the charges were manifestly frivolous, yet so strong was the popular torrent against him, that he thought proper to withdraw into France. Soon after, the king formed an alliance with Holland and Sweden, to prevent the French king from completing his conquest of the Netherlands. The greatest part of this country he had already subdued, when he was unexpectedly stopped by this league; in which it was agreed by the contracting powers, that they would constitute themselves arbiters of the differences between France and Spain, and check the exorbitant pretensions of either. The king now began to act in a very arbitrary manner. He had long wished to extend his prerogative, and to be able to furnish himself with whatever sums he might want for his pleasures, and therefore was most likely to be pleased with those ministers who could flatter both his wishes at once. These he found in Clifford, Ashley, Buckingham, Arlington, and Lauderdale, a junto distinguished by the name of the CABAL; a word formed by the initials of their names. The first effects of their advice was a secret alliance with France, and a rupture with Holland. Soon after this, the duke of York declared himself a Papist; and liberty of conscience was proclaimed to all sectaries, whether dissenters or Papists: a proclamation was issued containing very rigorous clauses in favour of pressing; another full of menaces against those who should speak undutifully of his majesty's measures; and even against those who heard such discourses, unless they informed in due time against the offenders. All these things gave very great and just offence to the people; but they were especially alarmed at the alliance with France, and justly afraid of the treachery of that court. On the 28th of May 1672, the English fleet under the duke of York was surprised by the Dutch in Southwold bay. About 8 A. M. began a most furious engagement. The gallant Sandwich, who commanded the English van, drove his ship into the midst of the enemy, beat off the admiral that ventured to attack him, sunk another ship that attempted to board him, and 3 fire-ships that offered to grapple with him. Though his vessel was torn with shot, and out of 2000 men there only remained 400, he still continued to fight. At last, a fire-ship, more fortunate than the rest, having laid hold of his vessel, her destruction became inevitable, and the earl himself was drowned in attempting to swim to some other ship. Night parted the combatants; the Dutch retired and were not followed by the English. The loss sustained by the two maritime powers was nearly equal; but the French suffered very little, not having entered into the heat of the engagement. It was even supposed, that they had orders for this conduct, and to spare their own ships, while the Dutch and English should weak-

on each other by their mutual exertions. The combined powers were much more successful against the Dutch by land. Lewis XIV. conquered all before him, crossed the Rhine, took all the frontier towns of the enemy, and threatened the new republic with a final dissolution. Terms were proposed to them by the two conquerors. Lewis offered them such terms as would have deprived them of all power of resisting an invasion from France by land. Those of Charles exposed them equally to every invasion by sea. At last the murmurs of the English at seeing this brave and industrious people, the supporters of the Protestant cause, totally sunk and on the brink of destruction, were too loud not to reach the king. He was obliged to call the parliament, to take the sense of the nation upon his conduct; and he soon saw how his subjects stood affected. The parliament met on the 4th Feb. 1673. They began with repressing some of the king's extraordinary stretches of prerogative, and establishing uniformity in religious matters. A law was passed entitled the *test act*, imposing an oath on all who should enjoy any public benefice. Besides taking the oaths of allegiance and the king's supremacy, they were obliged to receive the sacrament once a year in the established church, and to abjure all belief in the doctrine of transubstantiation. As the dissenters also had seconded the efforts of the commons against the king's declaration of indulgence to Roman Catholics, a bill was passed for their ease and relief, which, however, went with difficulty through the house of peers. The Dutch in the mean time continued to defend themselves with such valour, that the commons began to despair of success. They therefore resolved that the standing army was a grievance; they next declared, that they would grant no more supplies to carry on the Dutch war, unless it appeared, that the enemy were so obstinate as to refuse all reasonable conditions. To cut short these disagreeable altercations, the king resolved to prorogue the parliament; and with that intention, went to the house of peers, from whence he sent the usher of the black rod to summon the house of commons to attend. It happened that the usher and the speaker met at the door of the house; but the speaker being within, some of the members suddenly shut the door, and cried, "To the chair." Upon which the following motions were instantly made, in a tumultuous manner: That the alliance with France was a grievance; that the evil counsellors of the king were a grievance; that the earl of Lauderdale was a grievance; and then the house rose in great confusion. The king, finding that he could expect no supply from the commons for carrying on the war, resolved to make a separate peace with the Dutch, on terms which they had proposed by the Spanish ambassador. For form's sake, he asked the advice of his parliament, who concurring heartily in his intentions, a peace was concluded accordingly.

(57.) ENGLAND, HISTORY OF, TILL THE ESTABLISHMENT OF THE HABEAS CORPUS ACT. The prepossession which Charles had all along shown for France, and his manifest inclination upon all occasions to attach himself to that court, had given great offence. Other circumstances al-

so co-operated to raise a general discontent. The toleration of Catholics, so much wished for by the king; the bigotry of the duke of York, the heir apparent to the crown, and his zeal for the propagation of the Catholic religion; excited a general and just apprehension, that the Protestant religion was in danger. These discontents were increased and fomented by designing men, who promote their own interests, did not scruple to advance the grossest falsehoods. In 1678, an account of a plot formed by the Papists for deposing the king and the Protestant religion, was given in by one Kirby a chemist, Dr Tong, a weak credulous clergyman, and Titus Oates, who had likewise been a clergyman, but was a most abandoned miscreant. The circumstances attending this pretended discovery were so perfectly incredible, that it appears amazing how any person of common sense could give ear to them. Nevertheless, so much were the minds of the nation in general inflamed against the Catholics at this time, that it not only produced the destruction of several individuals of the Romish persuasion, but an universal massacre of that unhappy sect was apprehended. The parliament who ought to have repressed these falsehoods, and brought back the people to calm inquiry, were found more credulous than even the people themselves. The cry of plot was immediately echoed from one house to the other; the country party could not slip so favourable an opportunity of managing the passions of the people; the courtiers were afraid of being thought disloyal if they should doubt the guilt of those who were accused of designs against the king's person. Danby, the prime minister, himself entered into it very furiously, and persisted in his inquiries notwithstanding all the king's advice to the contrary. Charles himself, who was the person that ought to have been most concerned, was the only one who treated it with contempt. Nothing, however, could stop the popular fury; and for a time the king was obliged to give way to it. During this general uproar, the lord treasurer Danby was impeached in the house of commons by Seymour the speaker. The principal charge against him was, his having written a letter to Montague the English ambassador at Paris, directing him to sell the king's good offices at the treaty of Nimeguen, to the king of France, for a certain sum of money; contrary to the general interests of the confederates, and even to those of his own kingdoms. Though the charge was just, yet Danby had the happiness to find the king resolved to defend him. Charles assured the parliament, that, as he had acted in every thing by his orders, he held him entirely blameless; and though he would deprive him of all his employments, yet he would positively insist on his personal safety. The lords were obliged to submit, though they went on to impeach him, till Danby was sent to the Tower. These proceedings were carried on by a house of commons that had continued undissolved for above 17 years. Charles at last dissolved them, and called a new parliament, which, however, proved as unmanageable as the preceding. The members, resolved to check the growth of Popery by striking at the root of the evil, brought in a bill for the total exclusion of the

duke of York from the crown of England and land, which passed the lower house by a majority of 79. They next voted the king's standing army and guards to be illegal. They proceeded to establish limits to the king's power of imprisoning delinquents at will. They had also the merit of passing the celebrated statute called the *HABEAS CORPUS ACT*, which confirms the subject in an absolute security from oppressive power. (58.) ENGLAND, HISTORY OF, TO THE BATTLE OF BOTHWELL BRIDGE. During these commotions the duke of York had retired to Brussels; an indisposition of the king led him back to England, to be ready in case of any sinister accident, to assert his right to the throne. After pressing upon his brother to disgrace his natural enemy the duke of Monmouth, who was now become popular, he himself retired to Scotland, unpretence of quieting the apprehensions of the English nation, but in reality to strengthen his interests in that part of the empire. This selfishness served still more to inflame the country party, who were strongly attached to the duke of Monmouth, and were resolved to support him against the duke of York. Mobs, petitions, popeings, &c. followed, and were employed to keep up the terror of Popery, and alarm the court. The parliament had encouraged various classes of informers, which increased the number of these miscreants, and plots became more numerous. Plot was set up against plot; and the people were kept suspended in the most dreadful apprehension. But it was not by plots alone that adverse parties endeavoured to supplant each other. Tumultuous petitions on the one hand, flattering addresses on the other, were sent from all quarters. Wherever the country prevailed, petitions were sent to the king filled with grievances and apprehensions. Wherever the church or court party prevailed, addresses were framed, containing expressions of the highest regard to his majesty, and the deepest abhorrence of those who endeavoured to disturb the public tranquillity. Thus the nation came to be distinguished into *petitioners* and *abhorbers*. *WHIG* and *TORY*, also, were now first used as terms of reproach. See these articles. All this time the king had tyrannized over the Scots in a very cruel manner. Being apprized of the tendency of Presbyterian principles to a republican form of government, Charles, like his predecessors, had endeavoured to introduce episcopacy there, but in much more violent manner than had been formerly attempted. The rights of patrons had for many years been abolished; and the power of electing ministers had been vested in the kirk sessions and lay elders: but it was now enacted, that incumbents who had been admitted upon this condition should receive a presentation, and be installed anew by the bishop, under the penalty of deprivation. In consequence of this, 350 parishes were at once declared vacant. New ministers were sought for all over the kingdom, and none, however vicious or ignorant, were rejected. The people, as might have been expected, were pleased to the highest degree; they resolved never, to give no sign of mutiny or sedition, notwithstanding their discontent. This submission

made it foolishly imagined, that, as they did not complain for a little ill usage, they would submit altogether if they were worse treated. In 1661, a very severe act was passed in England against conventicles, and this severity was imitated by the Scots parliament, who passed a similar act. Military force was next let loose. (See *CARGILLITES*.) Wherever the people had generally forsaken their churches, the guards were quartered throughout the country. They were commanded by Sir James Turner, a man of a very furious temper and dissolute life. He went about and received lifts from the clergy of those who absented themselves from the churches, or were supposed to frequent conventicles. Without any proof, or legal conviction, he demanded a fine from them; and quartered soldiers on the supposed criminals till he received payment. An insurrection being dreaded during the Dutch war, new forces were levied, and entrusted to the command of Dalziel and Drummond, two men of very cruel dispositions; and the Scots parliament gave full scope to all their enormities. Representations were now made to the king, who promised some redress. But his lenity came too late. In 1668, the people rose in arms. They surprised Turner in Dumfries, and resolved to have put him to death; but finding his orders to be more violent than his execution of them, they spared his life. At Lanark they renewed the covenant, and published their manifesto; where they professed their submission to the king, and only desired the re-establishment of presbytery, and of their former ministers. Their force did not exceed 2000 men; and though the country in general bore them great favour, men's spirits were so subdued, that the insurgents could expect no great increase of numbers. Dalziel took the field to oppose them. The number of the covenanters was now reduced to 800, and these no way capable of contending with regular forces. Having advanced near Edinburgh, they attempted to find their way back into the west by Pentland hills. Here they were attacked by the king's troops, and received the first charge very resolutely: but that was all the action. Immediately they fell into confusion, and fled. About 40 were killed on the spot, and 130 taken prisoners. So early as the year 1661, the presbyterians had deputed one Sharp, to lay their grievances before the king. Instead of this, their deputy abandoned their cause altogether, became their violent enemy, and as a reward of his treachery was made archbishop of St Andrew's. After the battle of PENTLAND HILLS, this renegade was the foremost to take vengeance on the unhappy insurgents, whose oppressed state and inoffensive behaviour had made them objects of universal compassion. Ten were hanged on one gibbet in Edinburgh; 35 before their own doors in different places. They might all have saved their lives, if they would have renounced the covenant; but this they absolutely refused. The executions were going on, when the king wrote a letter to the privy council, in which he ordered that such of the prisoners as should simply promise to obey the laws for the future should be set at liberty, and that the incorrigible should be sent to the plantations. This letter was brought to the council by

Burnet,

Burnet, but was not immediately delivered by Sharp. It had been customary to put these poor creatures to very severe tortures, to make them confess that to be a falsehood, which they believed to be true. By Sharp's delay, one Hugh Maccaill had been tortured, who would otherwise have escaped; and so violent were the torments he endured, that he expired under them. Yet he seemed to die in an ecstacy of joy. His last words were uttered with an accent which struck the bystanders with astonishment. "Farewel (said he) sun, moon, and stars; farewell world and time; farewell weak frail body; welcome eternity; welcome angels and saints; welcome Saviour of the world; and welcome God the judge of all." In 1670, an act against conventicles was passed, seemingly with a design of mitigating the former persecuting laws; though even this was severe enough. By this act, the hearer in a conventicle (that is, in a dissenting meeting where more than five besides the family were present) was fined 5s. for the first offence, and 10s. for the second; the preacher L. 20 for the first offence, and L. 40 for the second. The person in whose house the conventicle met was fined a like sum with the preacher. One remarkable clause was, that if any dispute should arise with regard to the interpretation of any part of the act, the judges should always explain the doubt in the sense least favourable to conventicles, it being the intention of parliament entirely to suppress them. As the violent methods used by the king were found ineffectual to obtain his purpose in Scotland, in 1678 a scheme of comprehension was tried, by which it was proposed to diminish greatly the authority of the bishops, to abolish their negative voice in the ecclesiastical courts, and to leave them little more than the right of precedency among the presbyters: but this too was rejected by the people, who well knew its tendency. The next scheme was an indulgence. By this, the most popular of the expelled preachers, without requiring any terms of submission to the established religion, were settled in vacant churches; and small salaries of about 20l. a-year were offered to the rest, till they should be otherwise established. This bounty was rejected as the wages of criminal silence, and the replaced ministers soon repented of their compliance; conventicles multiplied, and the covenanters daily met in arms at their places of worship, though they usually dispersed after divine service. These mild methods being rejected, a renewal of the persecution commenced under the administration of the duke of Lauderdale, and in which Abp. Sharp had a principal hand. It was an old law, but seldom put in execution, that a man who was accused of any crime, and did not appear to take his trial, might be *inter-communed*; that is, he might be publicly outlawed; and whoever afterwards, either on account of business, relation, or charity, had the least intercourse with him, was subjected to the same penalties which the law could inflict on the criminal himself. Great numbers of writs of intercommuning were now issued against the covenanters; by which absurd method of proceeding, crimes and punishments were multiplied to an extreme

degree. Application was made to Charles for some redress of these grievances: but he was too much taken up with his pleasures to take any effectual means of putting a stop to them; nay, even while he retracted them, he was persuaded to avow and praise them in a letter to the privy council. The consequence of all this was, that the covenanters were at last so much enraged against Sharp, whom they considered as an apostate and experienced to be an unrelenting persecutor, that, on the 3d of May 1679, he was waylaid and murdered. See SHARP, N° 11. The murder of Sharp produced a persecution still more violent, which at last brought on another infamy. The covenanters finding themselves obliged to meet in large bodies, and bring arms along with them for their own security, set forth a declaration against prelacy, which they published at Dherglen, a small borough near Glasgow; and the market place there they burned several ecclesiastical government, and had prohibited conventicles. For this purpose they chose 29th of May, the anniversary of the restoration, and previously extinguished the bonfires that been kindled on that occasion. Count Graham afterwards viscount Dundee, an active and enterprising officer, attacked a great conventicle at Loudon hill, but was repulsed with the loss of 400 men. The covenanters then finding themselves unwarily engaged in rebellion, were obliged to persevere; and therefore pushed on to Glasgow, which, though repulsed at first, they afterwards made themselves masters of. Here they dissolved the established clergy, and issued proclamations, in which they declared that they fought against the king's supremacy, against Popery, Prelacy, and a Popish successor. Charles, now alarmed, dispatched against the covenanters a small body of English cavalry under the duke of Monmouth. He joined the Scots guards, some regiments of militia levied from the western counties; and with great celerity marched in quest of the insurgents. They had taken at Bothwell-bridge between Hamilton and Glasgow; where there was no access but by the bridge, and where a small body was able to defend against the king's army. The whole army of covenanters never exceeded 8000 men, and had in reality no other generals than their clerical men. Monmouth attacked the bridge, and the covenanters maintained their post as long as their ammunition lasted. When they sent for more, they received orders to quit their post and retreat, and this imprudent measure occasioned an immediate defeat. Monmouth passed the bridge without opposition, and drew up his forces opposite the enemy. His cannon alone put them to rout; about 700 were killed in the pursuit, 1200 taken prisoners, who were treated with humanity by Monmouth. Such as promised to be peaceably under the government were dismissed, and about 300 who refused this condition were shipped for Barbadoes, but unfortunately perished by the way. Two of their clergymen were hanged. Soon after, an act of indemnity was passed: but Lauderdale took care that it should

ed little protection to the unhappy convents; for though orders were given to continue thenceforward at all conventicles, he found us under a variety of pretences to elude the cution of them.

59.) ENGLAND, HISTORY OF, TO THE DEATH KING CHARLES II. It is now certainly known, Charles II. had formed a scheme of overturning the established religion, and substituting Popery in its place; as well as of rendering himself absolute. In this, however, he met with violent opposition from his parliaments; and as this one 1679 even surpassed their predecessors in violence, the king dissolved them and called another 680. By this step, however, he was no gain. They voted the legality of petitioning the king; and fell with extreme violence on the abusers, who in their addresses to the crown had expressed their disapprobation of those petitions. At numbers of these were seized by their order all parts of England, and committed to close custody: the liberty of the subject, which had been so carefully guarded by their own recent laws, was every day violated by their arbitrary and atrocious imprisonments. One Stowel of Exeter a stop to their proceedings: he refused to obey serjeant at arms who was sent to apprehend him; he stood upon his defence, and said he knew law by which the house of commons pretended to commit him. The house, finding it equally dangerous to proceed or recede, got off by an expedient. They voted that Stowel was indisposed: a month's time was allowed him for his recovery. It is happy for the nation, that should the commons at any time overleap the bounds of their authority, and capriciously order men to be put in prison, there is no power, in case of resistance, that can compel the prisoner to submit to their decrees. The chief point aimed at by this parliament was, to obtain the exclusion bill, which the former house had voted it, was never passed into a law. It passed by a great majority in the house of commons, but was thrown out by the house of peers. All the bishops except one voted against it; for they were of opinion, that the church of England was in much greater danger from the prevalence of presbyterianism than from Popery. The commons were extremely mortified at the rejection of their favourite bill: in revenge, they passed several other disagreeable laws, among which one was, That, till the exclusion bill was passed, they could not, consistent with the trust reposed in them, grant the king any money for supply; and that whoever should hereafter lend, by way of advance, any money upon any branches of the king's revenue, should be punishable to parliament for his conduct. Charles, therefore, finding that there were no hopes of extracting either money or obedience from the commons, came to a resolution of once more dissolving the parliament. His usher of the black rod accordingly came to dissolve them, while they were voting that the dissenters should be encouraged, and that the Papists had burned the city of London. It was for some time a doubt whether the king would ever call another parliament: necessities, however, surmounted all his fears of their violence; and, in 1681, he summoned a

new parliament to meet him at Oxford, that he might thus have an opportunity of punishing the citizens of London, by showing his suspicions of their loyalty. In this, as in all former parliaments, the country party predominated; and they trode exactly in the same paths with their predecessors. The same speaker was chosen, and the exclusion bill urged more fiercely than ever. Ernely, one of the king's ministers, proposed that the duke should be banished 500 miles from England; and that on the king's decease the next heir should be constituted regent with regal power. Yet even this expedient, which left the duke only the bare title of *king*, could not obtain the attention of the house. Nothing but a total exclusion could satisfy them. Each party had now for some time reviled and ridiculed each other in pamphlets and libels; and this practice at last was attended with an incident that deserves notice. One Fitzharris, an Irish Papist, employed a Scotsman, named *Everhard*, to write a libel against the king and the duke of York. Everhard was actually a spy for the contrary party; and supposing this a trick to entrap him, he discovered the whole to Sir William Waller, an eminent justice of the peace; and, to convince him of the truth of his information, posted the magistrate and two other persons privately, where they heard the whole conference between Fitzharris and himself. The libel composed between them was replete with the utmost rancour and scurrility. Waller carried the intelligence to the king, and obtained a warrant for committing Fitzharris, who happened at that very time to have a copy of the libel in his pocket. Seeing himself in the hands of a party from whom he expected no mercy, he resolved to throw the odium of the libel upon the court, who, he said, were willing to draw up a libel which should be imputed to the exclusioners, and thus render them hateful to the people. He enhanced his services to the country party by a new Popish plot more tremendous than any of the foregoing, and in which he brought in the duke of York as a principal accomplice. The king imprisoned Fitzharris; the commons avowed his cause. They voted that he should be impeached by themselves, to screen him from the ordinary forms of justice: the lords rejected the impeachment; the commons asserted their right: a commotion was likely to ensue; and the king, to break off the contest, went to the house and dissolved the parliament, with a fixed resolution never to call another. From this moment the king ruled with despotic power. His temper, which had always been easy and merciful, now became arbitrary and cruel; he entertained spies and informers round the throne, and imprisoned all such as he thought most daring in their designs. He resolved to humble the presbyterians; divested them of their employments and their places; and gave their offices to such as held with the court, and approved the doctrine of non-resistance. The clergy began to testify their zeal and their principles by their writings and sermons; but though among these the partizans of the king were the most numerous, these of the opposite faction were the most enterprising. The king openly espoused the cause of the former; and thus placing himself at the head of a faction, he depriv-

ved the city of London, which had long headed the popular party, of their charter. It was not till after an abject submission that he restored it to them, having previously subjected the election of their magistrates to his own immediate authority. Terrors also were not wanting to confirm this new species of monarchy. Fitzharris was brought to a trial before a jury, and condemned and executed. The whole gang of spies, witnesses, informers, and suborners, who had long been encouraged and supported by the leading patriots, finding now that the king was entirely master, turned short upon their old employers, and offered their evidence against those who first put them in motion. The king's ministers gave them encouragement; and in a short time the same injustice and the same cruelties were practised against presbyterian schemes, that had formerly been practised against Catholic treasons. The king's chief resentment was levelled against the earl of Shaftesbury; and, indeed, not without reason, as he had had a very active hand in the late disturbances. No sums were spared to seek for evidence, or even to suborn witnesses, against this intriguing and formidable peer. A bill of indictment being presented to the grand jury, witnesses were examined, who swore to such incredible circumstances as must have invalidated their testimony, even if they had not been branded as perjured villains. Among his papers, indeed, a draught of an association was found, which might have been construed into treason; but it was not in the earl's hand writing, nor could it be proved that he had ever communicated this scheme to any body, or signified his approbation of any such project. The sheriffs had summoned a jury, whose principles coincided with those of the earl; and that probably, more than want of proof, procured his safety. In 1683, the city of London was deprived of its charter; which was restored only upon terms of the utmost submission, and giving up the nomination of their own magistrates. This was so mortifying a circumstance, that all the other corporations in England soon began to fear the same treatment, and were successively induced to surrender their charters into the hands of the king. Considerable sums were exacted for restoring these charters; and all the offices of power and profit were left at the disposal of the crown. Resistance now, however justifiable, could not be safe; and all prudent men saw no other expedient but submitting patiently to the existing grievances. There was a party, however, in England, that still cherished their former ideas of freedom, and resolved to restore liberty to their country, by dethroning the king who acted in such a despotic manner. The principal conspirators were Monmouth, Shaftesbury, Ruffel, Essex, Howard, Algernon Sidney, and John Hambden, grandson to the great man of that name. Monmouth engaged the earl of Macclesfield, Lord Brandon, Sir Gilbert Gerard, and other gentlemen in Cheshire. Lord Ruffel fixed a correspondence with Sir William Courtney, Sir Francis Knowles, and Sir Francis Drake, who promised to raise the west. Shaftesbury, with one Ferguson, an independent clergyman, and a restless plotter, managed the city, upon which the confederates chiefly relied. These

schemes had been laid in 1681: but the caution of Lord Ruffel, who induced the duke of Monmouth to put off the enterprise, saved the kingdom from the horrors of a civil war; while Shaftesbury was so struck with a sense of his impending danger, that he left his house, and lurking about the city, attempted, but in vain, to drive the Londoners to an open insurrection. At last, enraged at the numberless cautions and delays which clogged and defeated his projects, he threatened to begin with his own friends singly. However, after a long struggle between fear and rage, he abandoned all hopes of success, and fled to Amsterdam, where he soon after died. The duke of Shaftesbury, though it retarded, did not suppress the designs of the conspirators. The remaining six formed a council; they corresponded with Argyle and the malecontents in Scotland; and resolved to prosecute the scheme of the insurrection, though they widely differed in principles from each another. Monmouth aspired at the crown; Ruffel and Hambden proposed to exclude the duke of York from the succession, and redress the grievances of the nation; while Sidney and Essex were for restoring the republic. Lord Howard was an abandoned man, who, having no principle, sought to embroil the nation, to gratify his private interest in the confusion. Besides these, there was a set of subordinate conspirators, who frequently met together, and carried on projects quite unknown to Monmouth and his council. Among these was colonel Rumsey, an old republican officer; lieutenant colonel Walcot, of the same stamp; Goodenough, under sheriff of London, a zealous and noted party man; Ferguson, an independent minister; and several attorneys, merchants, and tradesmen of London. But Rumsey and Ferguson were the only persons that had access to the great leaders of the conspiracy. These men undertook the desperate resolution of assassinating the king in his way to New-market. Rumbold, one of the party, possessed a farm upon that road, called the *Rye-house*, and from thence the conspiracy was called the *Rye-house plot*. They deliberated on a scheme of stopping the king's coach by overturning a cart on the high way at this place, and shooting him through the hedge. The house in which the king lived at New-market accidentally took fire, and he was obliged to leave New-market eight days sooner than he was expected; to which circumstance he owed his safety. Soon after this the conspiracy was discovered; Ruffel, Sidney, and Walcot, were executed; Essex cut his own throat; Hambden was fined 40,000*l.* and scarce one escaped who had been in any manner concerned, except the duke of Monmouth, who was the most culpable of all. This was the last blood that was shed on account of those plots, which had continued during the greatest part of this reign. Severe punishments, however, were inflicted on many who treated the duke of York disrespectfully. The famous Titus Oates was fined 100,000*l.* for calling him a Popish traitor; and he was imprisoned till he should pay it, which he was absolutely incapable of. A similar sentence was passed upon Dutton Colt. Sir Samuel Barnardiston was fined 10,000*l.* for having in some private letters reflected on the government.

government. The government of Charles was now as absolute as that of any prince in Europe; but to please his subjects by an act of popularity, he married the lady Anne, his niece, to prince George brother to the king of Denmark. This was the last remarkable transaction of this extraordinary reign. On Feb. 2d, 1685, about 8 A. M. the king was seized with a fit of apoplexy; being refused, and just come out of his closet, where he had been for some time after he rose. By being hooded, he was restored perfectly to his senses; and there were great hopes of his recovery the next day. But on the 4th day the physicians declared of his life, and therefore sent for the queen. It was in his perfect senses when she arrived. She threw herself on her knees, and asked his pardon for all her offences. He replied that she had offended in nothing; but that he had been guilty of offences against her, and asked her pardon. He spoke with great affection to the duke of York, and gave him excellent counsel for his future conduct. He advised him to adhere strictly to the laws, and invariably to support the church of England. The duke seemed anxious to convince him before he died how little he intended to follow his advice. Having removed the bishops and several of the lords who attended, he sent for Huddleston, a Romish priest. In the presence of the duke, the earl of Bath, and Trevanion a captain in the guards, Huddleston gave the extreme unction to the king, and administered to him the sacrament according to the rites of the church of Rome. All this was done in the space of half an hour. The doors were then thrown open. Six ladies, who had before attended the king, were ordered to give him the sacrament. Kenn, bishop of Bath and Wells, read the visitation for the sick; after he said that he repented of his sins, the dissolution. The king assisted with seeming devotion at the service; but his mouth being distorted by fits, and his throat contracted, he could not swallow the elements. He professed, however, satisfaction in the church of England; and expired on the 6th Feb. between 11 and 12 o'clock; he reigned 25 years, and lived 55.

G.) ENGLAND, HISTORY OF, TO THE EXILE OF THE D. OF MONMOUTH, AND HIS DESCENDANTS. The first act of James II's reign was to assemble the privy council: where, after some words bestowed on the memory of his brother, he made professions of his resolution to maintain the established government both in church and state; and as he had heretofore ventured his life in defence of the nation, he would still go as far as any prince in maintaining all its just rights and privileges. His discourse was received with great applause, and only by the council, but by the whole nation. His refusal came from all quarters, full of duty, and of the most servile adulation. From this time, however, we must except those of the king's reign, which is remarkable for its good sense and implicitly. "We are come (said they) to testify sorrow for the death of our good friend Charles, and our joy for thy being made our governor. We are told that thou art not of the persuasion of the church of England no more than we: wherefore we hope that thou wilt grant us the same liberty which thou allowest thyself. Which doing,"

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we wish thee all manner of happiness." The king, however, soon showed, that he either was not sincere in his promises, or that he entertained so lofty an idea of his own regal power, that even his utmost sincerity could tend very little to the security of the liberties of the people. All the customs, and the greater part of the excise, which had been voted to the late king for his life only, were levied by James without a new act for that purpose. He went openly to mass with all the ensigns of his dignity; and even sent one Caryll as his agent to Rome, to make submissions to the Pope, and to pave the way for the readmission of England, into the bosom of the Catholic church. From the suggestions of these men all his measures were undertaken. One day when the Spanish ambassador ventured to advise his majesty against putting too much confidence in such kind of people, "Is it not the custom in Spain (said James) for the king to consult with his confessor?" "Yes (answered the ambassador), and that is the reason why our affairs succeed so very ill." James's first parliament, which was composed mostly of zealous Tories, was strongly inclined to comply with the measures of the crown. They voted unanimously, that they should settle on the present king, during life, all the revenue enjoyed by the late king till the time of his decease. For this favour, James assured them, that he would secure them in the full enjoyment of their laws; but with regard to religion, no answer could be expected, for that he was resolved to alter. In every thing, however, religion excepted, James merited every praise. He applied himself to business with unremitting attention. He managed his revenue with the strictest economy. He retrenched superfluous expences, and showed himself zealous for the glory of the nation. He endeavoured to expel from court the vice which had prevailed so much during the former reign, and to restore decency and morality. He presided daily at the council, at the boards of admiralty and treasury. He even entered into the whole detail of the concerns of the great departments of the state. But his bigotry for the Romish religion sullied all his good qualities, and rendered him feared for his violence, where he was not despised for his weakness. But whilst every thing was submitted in tranquillity to James at home, a storm was gathering abroad to disturb his repose. For a long time the prince of Orange had entertained hopes of ascending the British throne, and had even used all his endeavours to exclude James from it. Monmouth, who, since his last conspiracy, had been pardoned, but ordered to depart the kingdom, had retired to Holland. He was received by the prince of Orange with the highest marks of distinction, and even became his chief favourite, through whom all favours were to be obtained. When the news of Charles's death arrived, indeed, the prince made a show of altering his note, and dismissed Monmouth, though he still kept a close correspondence with him. The duke retired to Brussels, where, under the auspices of the prince of Orange, he resolved to invade England, with a design of seizing the crown for himself. He was seconded by the duke of Argyle, who formed the scheme of an insurrection in Scotland; and while

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Monmouth

Monmouth attempted to make a rising in the west of England, it was resolved that Argyle should also try his endeavours in the north. The generosity of the prince of Orange, however, did not correspond with the warmth of his professions. The unfortunate duke derived from his own plate and jewels his whole supply for the war; and the enthusiasm of a rich widow supplied Argyle with 10,000*l.* wherewith he purchased three vessels, which he loaded with arms and ammunition. Argyle was the first who landed in Scotland, where he published his manifestoes, put himself at the head of 2500 men, and strove to influence the people in his favour. But a formidable body of the king's forces coming against him, his army fell away; and he himself, after being wounded in attempting to escape, was taken prisoner by a peasant who found him standing up to the neck in water. He was from thence carried to Edinburgh, where, after suffering many indignities, he was publicly executed. See CAMPBELL, N^o 2. By this time Monmouth had landed in Dorsetshire with scarce 100 followers. His name, however, was so popular, and so great was the hatred of the people to James on account of his religion, that in 4 days he had assembled a body of above 2000 men. They were indeed all of them the lowest of the people, and his declarations were suited entirely to their prejudices. He called the king the duke of York; and denominated him a traitor, a tyrant, a murderer, and a Popish usurper. He imputed to him the fire of London, and even affirmed that he had poisoned the late king. Monmouth continued to make a rapid progress, and soon found himself at the head of 6000 men; but was daily obliged to dismiss great numbers for want of arms. The king was not a little alarmed at his invasion. Six regiments of British troops were called over from Holland; and a body of regulars, to the number of 3000, were sent, under the command of the earl of Feversham and Churchill, to check the progress of the rebels. They took post at Sedgemoor, a village near Bridgewater, and were joined by considerable numbers of the country militia. Here Monmouth resolved, by a desperate effort, to gain the kingdom or lose his life. He drove the royal infantry from their ground, and was on the point of gaining a complete victory, when the cowardice of Gray, who commanded the horse, brought all to ruin. This nobleman fled at the first onset; and the rebels, being charged in flank, gave way after a contest of 3 hours. About 300 were killed in the engagement, and 1000 in the pursuit. Monmouth fled about 20 miles from the field of battle, till his horse sunk under him. He then alighted; and, exchanging clothes with a shepherd, fled on foot, attended by a German count who had accompanied him from Holland. Being quite exhausted with hunger and fatigue, they both lay down in a field, and covered themselves with fern. The shepherd being found in Monmouth's clothes by the pursuers, increased the diligence of the search; and by means of blood hounds he was detected in this miserable situation, with raw peas in his pocket, on which he had lived for some days. He burst into tears when seized by his enemies; and petitioned, and made the most abject submission, for his life. On

his way to London, he wrote a submissive letter to the king, promising discoveries, should he be admitted into his presence. The curiosity of James being excited by the letter, he sent Sheldon, a gentleman of the bed chamber, to meet Monmouth. In his conversation with Sheldon, he asked who was in chief confidence with the king; and being answered that it was Sunderland, Monmouth knocked his breast in surprise, and said, "Why then, as I hope for salvation, he promised to meet ME." He desired Sheldon to inform the king, that several of his accomplices in rebellion were in the confidence of his majesty; and he gave him a particular account of the part which the prince of Orange had acted in this whole affair. Sheldon, on his return from the duke of Monmouth, began to give an account to the king of what he had learned from the unhappy prisoner. Sunderland, pretending business, came into the room. Sheldon stopped, and signified his desire to speak in private with the king. James told him that he might say any thing before that lord. Sheldon was in great perplexity; but being urged he told all that Monmouth had asserted. Sunderland appeared for some time confused; at least he said, with a laugh, "If that is all he can discover to save his life, he will derive little good from his information." Monmouth himself was soon after brought before the king. Sunderland, to save himself, and the other adherents of the prince of Orange, advised the duke, that he could assure him of the certainty of a pardon, he ought to deny what he had said in prejudice of his friends, who could serve him on some other more favourable occasion. The credulous duke, swayed by this advice, suppressed what he had said to Sheldon, when he was examined by the king. He mentioned nothing of the invasion; though James was already sufficiently informed of this. D'Avaux, the French minister to the States, had given a circumstantial account of the whole conduct of the prince to Lewis XIV. who had ordered it to be privately communicated to the king of England. The minister, who had been sent from Holland to congratulate James on the suppression of Argyle's rebellion, was in great perturbation when he heard that the king was resolved to see Monmouth. "Though he found that he said nothing of his master (said James), I was never quiet till Monmouth was dead." The unfortunate duke made various attempts to obtain mercy. He wrote to the queen dowager, and to the queen, as well as to the king himself. He begged his life, when admitted into his presence with a meanness unsuitable to his rank and pretensions. But all his entreaties and submissions were of no avail. James told him that he was much affected with his misfortunes, but that his crime was too dangerous in its example to be unpunished. In his last moments he behaved with a magnanimity worthy of his former courage. When he came to the scaffold, he behaved with decency and even with dignity. He spoke little, he made no confession; nor did he accuse any of his friends. Circumstances are said to have attended his death that created a horror among the spectators. The executioner mist his blow, and

ruck him slightly on the shoulder. Monmouth raised his head from the block, and looked him all in the face, as if reproaching him for his mistake. He struck him twice again, but with feeble strokes; and then threw the axe from his hands. The sheriff forced him to renew his attempt; and the head of the duke was at last severed from his body. Those concerned in the conspiracy were punished with the utmost severity. Immediately after the battle of Sedgemoor, Feverham hanged above 30 prisoners; and was proceeding in his executions, when the bishop of Bath and Wells informed him, that these unhappy men were now by law intitled to a trial, and that their execution would now be deemed a real murder. Nineteen were put to death in the same manner at Bridgewater by colonel Kirk, a man of a savage and bloody disposition. This vile fellow, practised in the arts of slaughter at Tangier, where he served in a garrison, took pleasure in committing instances of wanton barbarity. He ravaged the whole country, without making any distinction between friend and foe. His own regiment, for their peculiar barbarity, went under the ironical title of *Kirk's lambs*. It doth not, however, appear, that these cruelties were committed by the direction, or even with the approbation, of James; any more than the legal slaughter that were committed by judge Jefferies, who was sent down to try the delinquents. The natural brutality of this man's temper was inflamed by continual intoxication. No fewer than 80 were executed by his orders at Dorchester; and on the whole, at Exeter, Taunton, and Wells, 252 are computed to have fallen by the hand of *justice*, as it was called; nor were women exempted from the general severity, but suffered for harbouring their nearest kindred. Jefferies on his return was immediately created a peer, and soon after vested with the dignity of chancellor. In justice to the king, however, it must be owned, that in his Memoirs he complains, with apparent indignation, of, "the strange black-rook made by Jefferies and Kirk in the west;" and that he attributed the unpopularity, which afterwards deprived him of the crown, to the violence and barbarity of those pretended friends of his authority. He even ascribes their severities, in some degree, to a formed design of rendering his government odious to his subjects; and from hence it is probable, that no exact or impartial accounts of these cruelties had reached his ears, at least till long after they were committed.

(61.) ENGLAND, HISTORY OF, TO THE IMPRISONMENT OF THE BISHOPS BY K. JAMES II. James now began to throw off the mask, and to endeavour openly to establish Popery and arbitrary power. He told the house of commons, that the militia were found by experience to be of no use; that it was necessary to augment the standing army; and that he had employed many Catholic officers, in whose favour he had thought proper to dispense with the test required to be taken by all who were employed by the crown. He found them useful, he said, and he was determined to keep them employed. These stretches of power naturally led the lords and commons into some degree of opposition; but they soon acquiesced in the king's measures, and then the parliament

was dissolved for their tardy compliance. This was happy for the nation; for it was perhaps impossible to pick out another house of commons that could be more ready to acquiesce in the measures of the crown; but the dissolution of this parliament was generally looked upon as a sign that James never intended to call another. The parliament being dismissed, James's next step was to secure a Catholic interest in the privy council. Accordingly four Catholic lords were admitted, viz. Powis, Arundel, Belasis, and Dover. Sunderland, who saw that the only way to gain preferment was by Popery, became a convert. Rochester, the treasurer, was turned out of his office, because he refused to conform. Even in Ireland, where the duke of Ormond had long supported the royal cause, this nobleman was displaced as being a Protestant; and lord Tyrconnel, a furious Roman catholic, was placed in his stead. In his zeal for Popery, it is said, that James stooped so low as even to attempt the conversion of the bloody colonel Kirk; but the daring soldier told him, that he was pre-engaged; for he had promised the king of Morocco, when he was quartered at Tangiers, that, if ever he changed his religion, he would turn *Mabometan*. At last the clergy of the church of England began to take the alarm, and commenced an opposition to court measures. The pulpits now thundered out against Popery; and it was urged, that it was more formidable from the support granted it by the king. It was in vain that James attempted to impose silence on these topics; instead of avoiding the controversy, the Protestant preachers pursued it with greater warmth. To effect his designs, the king determined to revive the high commission court, which had formerly given the nation so much disgust, and which had been abolished for ever by act of parliament. An ecclesiastical commission was issued out anew, by which 7 commissioners were invested with a full and unlimited authority over the whole church of England.—The next step was to allow a liberty of conscience to all sectaries; and he was taught to believe, that the truth of the Catholic religion would then, upon a fair trial, gain the victory. In such a case, the same power that granted liberty of conscience might restrain it; and the Catholic religion alone be allowed to predominate. He therefore issued a declaration of general indulgence, and asserted that non-conformity to the established religion was no longer penal. But in Scotland, he ordered the parliament to grant a toleration only to the Catholics, without interceding in the least for the other dissenters who were much more numerous. In Ireland, the Protestants were totally expelled from all offices of trust and profit, and Catholics put in their places. These measures sufficiently disgusted every part of the British empire; but to complete the work, James publicly sent the earl of Castlemaine ambassador extraordinary to Rome, in order to express his obedience to the Pope, and reconcile his kingdoms to the Catholic communion. This proceeding was too precipitate to be relished even by the Pope himself; and therefore the only return he made to this embassy was the sending a nuncio into England. The nuncio made a public and solemn entry into Wind-

for; which did not fail to add to the general discontent; and because the duke of Somerset refused to attend the ceremony, he was dismissed from his employment of one of the lords of the bed-chamber. Soon after this, the Jesuits were permitted to erect colleges in different parts of the kingdom, and to exercise the Catholic worship in the most public manner. Father Francis, a benedictine monk, was recommended by the king to the university of Cambridge for the degree of M. A. The university rejected him on account of his religion; and presented a petition to the king, beseeching him to recal his mandate. James disregarded their petition, and denied their deputies a hearing; the vice-chancellor himself was summoned to appear before the high commission court, and deprived of his office; yet the university persisted, and father Francis was refused. The place of president of Magdalen college being vacant, the king sent a mandate in favour of one Farmer, a new convert, and a man of bad character in other respects. The fellows of the college made very submissive applications for recalling his mandate; but the election day coming on before they received an answer, they chose Dr Hough, a man of learning, integrity, and resolution. The king was incensed at their presumption; an inferior ecclesiastical court was sent down, who finding Farmer a man of scandalous character, issued a mandate for a new election. The man now recommended by the king was doctor Parker; a man of an abandoned character, but very willing to embrace the Catholic religion. The fellows refused to comply with this injunction; which so irritated the king, that he came down to Oxford in person, and ordered the fellows to be brought before him. He reproached them with their insolence and disobedience; and commanded them to choose Parker without delay. Another refusal on their side served still more to exasperate him; and finding them resolute in the defence of their privileges, he ejected them all except two from their benefices, and Parker was put in possession of the place. Upon this, the college was filled with Catholics; and Charnock, one of the two that remained, was made vice-president. In 1628, a 2d declaration for liberty of conscience was published almost in the same terms with the former; but with this peculiar injunction, that all divines should read it after service in their churches. The clergy resolved to disobey this order. Loyde bishop of St Asaph, Kenn of Bath and Wells, Turner of Ely, Lake of Chichester, White of Peterborough, and Trelawney of Bristol, together with Sancroft the primate, concerted an address in form of a petition to the king, which, with the warmest expressions of zeal and submission, remonstrated that they could not read his declaration consistently with their consciences, or the respect they owed the Protestant religion. The king received their petition with marks of surprise and displeasure. He said he did not expect such an address from the church of England, particularly from some amongst them; and persisted in his orders for their obeying his mandate. As the petition was delivered in private, the king summoned the bishops before the council, and there questioned them whether they would acknow-

ledge it. They for some time declined giving an answer; but being urged by the chancellor, they at last owned the petition. On their refusal to give bail, an order was immediately drawn for their commitment to the Tower, and the crown lawyers received directions to prosecute them for a seditious libel. The king gave orders that they should be conveyed to the Tower by water, as the whole city was in commotion in their favour. The people were no sooner informed of their danger, than they ran to the river side in prodigious multitudes, craving their blessing; calling upon heaven to protect them, &c. The very soldiers by whom they were guarded, kneeled down before them, and implored their forgiveness.

(62) ENGLAND, HISTORY OF. TO THE KING'S FLIGHT. The 29th of June, 1688, was fixed for the trial of the bishops; and their return was more splendidly attended than their imprisonment. Twenty-nine peers, a great number of gentlemen, and an immense crowd of people, waited upon them to Westminster hall. The dispute was learnedly managed by the lawyers on both sides. The jury withdrew into a chamber where they passed the whole night; but next morning they returned into court, and pronounced the bishops not guilty. Westminster hall instantly rang with loud acclamations, which were communicated to the whole extent of the city. They even reached the camp at Hounslow, where the king was at dinner in Lord Feverham's tent. James demanding the cause of those rejoicings, and being informed that it was nothing but the soldiers shouting for the delivery of the bishops; "Call you *that* nothing?" (cried he;) but so much the worse for *them*." Immediately after this, the king struck out the names of two of the judges, Powel and Holloway, who had appeared to favour the bishops; and issued orders to prosecute all those clergymen who had not read his declaration. It was found that, all had refused it except 200. He also sent a mandate to the new fellows whom he had obtruded on Magdalen college, to elect for president, in the room of Parker lately deceased, one Gifford, a doctor of the Sorbonne, and titular bishop of Madura. As the king found the clergy every where averse to his measures, he tried next what he could do with the army. He thought if one regiment should promise implicit obedience, their example would soon induce others to comply. He therefore ordered one of the regiments to be drawn up in his presence, and desired that such as were against his late declaration of liberty of conscience should lay down their arms. He was surprised to see the whole battalion ground their arms, except two officers and a few Roman catholic soldiers.—A fortunate circumstance happened about this time in his family. A few days before the acquittal of the bishops, the queen was brought to bed of a son, who was baptized by the name of JAMES. This would have served, if any thing could at that time, to establish him on the throne: but so great was the animosity against him, that a story was propagated that the child was supposititious; and so great was the monarch's pride, that he scorned to take any precautions to refute the calumny. Though James's own enthusiasm bordered on madness, the most wild of his religious projects

As seem to have been suggested by his ene- to accomplish his ruin. The earl of Sunder- whom he chiefly trusted, was a man of a- oned principles, insatiable avarice, and fitted ratagem, deception, and intrigue. The love oney was his ruling passion, and he sold his ace to the highest bidder. To such a degree he mercenary, that he became at once the oner of the prince of Orange and of the king ance. The former, who had long fixed his n the English throne, watched James's mo-, and took every advantage of his errors. He laid his schemes so extensively, that nothing ne birth of a male heir to the crown of Eng could possibly prevent him from an almost ediate possession of the kingdom. He had the s to render two thirds of the powers of pe interitted in his success. The treaty of burg, formed to break the power of France, l not accomplish its object without the accep- of England. The house of Austria, in both ranches, preferred their political views to zeal for the Romish faith, and promoted the onement of James as the only means to hum- cwis XIV. Even the Pope himself, Innocent was gained over to the measures of the prince rrange by other considerations, as well as igh his fixed aversion to France. The prince rrange sent his intimate friend the prince of lemont to Rome, to procure the aid of the e. He explained to his Holiness, that the Ca- c princes were in the wrong to expect any ntage to their faith from James, as his being igh Papist rendered his people averse to all easures. As for himself, should he have the fortune to mount the throne of England, he t take any step in favour of the Roman Catho- without jealousy: and he promised to pro- a toleration for the Papists, should the Pope, mperor, and the king of Spain favour his at- m. This negotiation procured the desired t. The Pope contributed, with the money e church, to expel a Roman catholic prince is throne. Though the contest with the ps had completed the king's unpopularity, erved the suddenness of his ruin from the of the prince of Wales. That circumstance ased the fears of his subjects in proportion as sed his hopes and security. In the reign of a te to be educated under the prejudices of a father, nothing but a continuance of the unconstitutional measures could be expected. w indeed was his credit sunk among the peo- it this time, and such precience they all seem- o have of his fate, that the child had almost before a wet nurse could be procured to ie him. The prince of Orange, seeing the onal discontent now raised to the highest pitch, ived to take advantage of it. He began by g one Dykevelt, his envoy, instructions to ap- in his name to every religious sect in the king- d. To the church party he sent assurances of ur and regard; and protested, that his edu- on in Holland had no way prejudiced him a- st episcopacy. To the non-conformists he exhortations, not to be deceived by the infi- us carresses of their known enemy, but to wait a real and sincere protector, &c. In conse-

quence of these insinuations, the prince soon received invitations from the most considerable persons in the kingdom. Admirals Herbert and Ruffel assured him in person of their own and the national attachment. Henry Sidney, brother to Algernon, and uncle to the earl of Sunderland, came over to him with assurances of an universal combination against the king. Lord Dumblaine, son to the earl of Danby, being master of a frigate, made several voyages to Holland, and carried from many of the nobility tenders of duty and even considerable sums of money to the prince of Orange. Soon after, the bishop of London, the earls of Danby, Nottingham, Devonshire, Dorset, and several other lords, gentlemen, and principal citizens, united in their addresses to him, and intreated his speedy descent. The people, though long divided between whig and tory, now joined against their unhappy sovereign as a common enemy. William therefore determined to accept of their invitations; and this the more readily, as he perceived the malecontents had conducted themselves with prudence and secrecy. Having the principal servants of James in pay, he was minutely informed of the most secret actions and even designs of that prince. His intelligence came through Sidney from Sunderland, who betrayed the very measures which he himself had advised. The prince had a fleet ready to sail, and troops provided for action, before the beginning of June, 1688. Lewis XIV. was the first who gave James warning of his danger, and offered to assist him in repelling it. But he declined this friendly offer, lest it should be said that he had entered into a private treaty with that monarch, to the prejudice of the Protestant religion. Being also deceived and betrayed by Sunderland, he had the weakness to believe, that the reports of an invasion were invented to frighten him into a strict connection with France. He gave credit to the repeated assurances of the States, that the armament prepared in their ports was not designed against England. Nay, he even believed the assertions of the prince himself, whose interest it was to deceive. Sunderland defected against the possibility of an invasion, and turned to ridicule all who believed the report. Having by the prior consent of James taken possession of all the foreign correspondence, he suppressed every intelligence that might alarm; and even all others whom James trusted, except Dartmouth, affected long to give no faith to the reports of an invasion. Lewis finding his first offers rejected, next proposed to march down his army to the frontiers of the Dutch provinces, and thus detain their forces at home for their own defence. But this proposal met with no better reception than the former. Lewis still unwilling to abandon a friend and ally, whose interest he regarded as closely connected with his own, ventured to remonstrate with the Dutch against the preparations they were making to invade England. The Dutch treated his remonstrance as an officious impertinence, and James himself declined his mediation. The king of England, having thus rejected the assistance of his friends, and being left to face the danger alone, was astonished with an advice from his minister in Holland, that an invasion was not only projected

but avowed. When he first read the letter containing this information, he grew pale, and the letter dropt from his hand. He saw himself on the brink of destruction, and knew not to whom to apply for protection. In this emergency, Lewis wrote to James in his own hand, that to divert the Dutch from their intended invasion of England, he would lay siege to Maestricht with 30,000 men. James communicated this intelligence to Sunderland, and he to the prince of Orange. Six thousand men were thrown into Maestricht; and the design of Lewis, as being impracticable, was laid aside. On this Lewis, disgusted with James, turned his arms towards Germany. The dauphin laid siege to Philipsburg, on the 5th of October; and prince Clement of Bavaria, by throwing a strong garrison into Cologne, effectually secured the states of Holland from any sudden danger from the arms of France. James had now no resource but in attempting to retreat from those precipitate measures which had plunged him into inextricable distress. He paid court to the Dutch, and offered to enter into any alliance with them for their common security. He replaced in all the counties of England all the deputy lieutenants and justices, who had been deprived of their commissions for their adherence to the test and penal laws. He restored the charters of such corporations as he had withdrawn; he annulled the high commission court; he reinstated the expelled president and fellows of Magdalen college; and was even reduced to caress those bishops, whom he had so lately persecuted and insulted. All these concessions, however, were now too late; they were regarded as the effects of fear and not of repentance. Indeed, it is said, he very soon gave proofs of his insincerity: for hearing that the Dutch fleet was dispersed, he recalled those concessions he had made in favour of Magdalen college; and to show his attachment to the Romish church, at the baptism of the prince of Wales, he appointed the pope one of the sponsors. In the mean time, William set sail from Helvoetsluys with a fleet of near 500 vessels, and an army of above 14,000 men. Fortune, however, seemed at first every way unfavourable to his enterprise. He was driven back by a dreadful storm; but he soon reftitted his fleet, and again set sail for England. It was given out that this invasion was designed for the coasts of France; and many of the English, who saw the fleet pass along their coasts, little suspected the place of its destination. The same wind which sent the Dutch to their place of destination, detained the English fleet in the river; so that the Dutch passed the straits of Dover without molestation; and after a voyage of two days, landed at Broxholme in Torbay, on the 5th November, the anniversary of the gunpowder treason. But though the invitation from the English was very general, the prince for some time had the mortification to find himself joined by very few. He continued for ten days in expectation of being joined by the malecontents; but at last, when beginning to despair of success and deliberating about reembarking his forces, he was joined by several persons of consequence, and the whole country soon after flocked to his standard. The first person that joined the prince was major Burrington, and he was

quickly followed by the gentry of the counties of Devon and Somerset. Sir Edward Seymour made proposals for an association, which was signed by great numbers; and every day produced instance of that universal combination into which the nation had entered against the measures of the king. This was followed by the defection of the earl of Colchester, son to the earl of Rivers, who deserted to the prince. Lord Cornbury, son to the earl of Clarendon, carried off the greatest part of 3 regiments of cavalry at once; and several officers of distinction informed Beverham the general, that they could not in honour fight against the prince of Orange. Soon after this, the unhappy monarch found himself deserted by his own servants and creatures. Lord Churchill had been raised from the rank of a page, and had been vested with an high command in the army; had been created a peer, and owed his whole fortune to the king's bounty: yet even he deserted among the rest; and carried with him the duke of Grafton, natural son to the late king, colonel Berkley and some others. In this universal defection, James, not knowing where to turn, began to think of requesting assistance from France, but it was now too late. He wrote to Leopold, emperor of Germany, but in vain; that monarch only returning for answer, That what he had seen had happened. James had some dependence on his fleet, but they were entirely dispersed. In a word, his interests were deserted by all; he had long deserted them himself. He still led his army, however, to amount to 30,000 men, and had led them immediately to battle, if possible they might then have fought in his favour. But James's misfortunes had deprived him of all natural firmness and resolution; and seeing himself deserted by those in whom he thought could have placed most confidence, he became suspicious of all, and was in a manner deprived even of the power of deliberation. In this extremity of distress, the prince of Denmark, and James's favourite daughter, perceiving the dejection of his circumstances, cruelly refused to take part with the prince of Orange. When the king was informed of this, he was struck with most bitter anguish. "God help me (cried he) my own children have forsaken me." To add to his distress as a parent, he was accused of being accessory to the death of his own child. Her mother and her uncle the earl of Clarendon, went up and down like distracted persons, affirming that Papists had murdered the prince. They paid asked the queen's servants whether they had conveyed her? and they contributed to inflame the populace, whose zeal had already inflamed to tumult and disorder. It was, however, known that she had fled, under the conduct of the bishop of London to Northampton. On the 3rd Nov. 1688, James sent three of his nobles to treat with the prince of Orange. But though the latter knew very well that the king's commissioners were in his interest, his behaviour was plain, that he now thought the time of treatment was past. For some time he would not admit them to an audience: and when he did, he gave no satisfactory answer. James now began to be afraid of his personal safety. But what he

ded him was the terrors of the queen for her- and her infant son. He therefore resolved to them abroad. They crossed the river in a t, at Whitehall, in a stormy and rainy day. y were carried to Gravesend in a coach, under conduct of the count de Lauzun. A yacht, imanded by captain Gray, which lay there ly for the purpose, soon transported them in ty to Calais. The king was now so dispirited distracted, that he resolved to leave the king- at once, and thus throw every thing into fution. He threw the great seal into the unes; he left none with any authority to con- t affairs in his absence; and he vainly hoped. erive advantage to his affairs from anarchy. ut as at night, on the 10th Dec. he disguised self, took a boat at Whitehall, and crossed the r. Sir Edward Hales, with another friend, him at Vauxhall with horses. He mounted; being conducted through by-ways by a guide, ased in the night-time to the Medway, which crossed by Ailesford bridge. At Woolpeck he t fresh horses, sent thither before by Sheldon, of his equerries, who was in the secret of his t. He arrived at 10 o'clock at Emby ferry r Feversham, where a custom-house hoy, hired Sir Edward Hales, lay ready to receive them board. But the wind blew fresh, and the ves- bad no ballast. The master, therefore, easily suaded the king to permit him to take in ballast shillocks. It being half ebb when they ran on re, they designed to sail as soon as the vessel ould be afloat. But when the vessel was almost t, she was boarded by three fisher boats be- ging to Feversham, containing 50 men. They ed the king and his two companions, under tence of their being Papists, that wanted to pe from the kingdom. They turned up Fe- ham water with the tide; but still the king ained unknown. Sir Edward Hales placed ately 50 guineas in the hands of the captain, in earnest of more should he permit them to pe. He promised; but was so far from keep- his word, that he took what money they had, ler pretence of securing it from the seamen; having possessed himself of their all, he left e to their fate. The unfortunate fugitives e at length carried in a coach to Feversham, st the insults, clamours, and shouts of the rs. When the king was brought to the inn, aman who had served under him knew him, melted into tears; and James himself was so ch moved at this instance of his affection, that wept. The other fishermen who had treated e with such indignity before, when they saw ears, fell upon their knees. The lower inha- nts of the whole village gathered round him; those of higher rank fled from his presence. e seamen, however, formed themselves into a rd round him, and declared, that "a hair of ur head should not be touched." In the mean e, Sir James Oxendon, under pretence of ending him from the rabble, came with the mi- a to prevent his escape. The king found a nge in his condition when he was taken out of hands of the sailors. The commanders of the itia showed him no respect. He was even in- ted by the common soldiers. A letter, which

he intended to send to London for clothes, a change of linen, and some money, was stopped by those who pretended to protect his person.

(63.) ENGLAND, HISTORY OF, TO THE REVO- LUTION, AND CONSEQUENT ELECTION OF K. WILLIAM III. AND Q. MARY II. On the flight of K. James, all things ran into confusion at London, and the prince of Orange exercised in his own per- son all the functions of royalty. He issued a de- claration to the disbanded army to reassemble themselves. He ordered the secretary at war to bring him a list of the king's troops. He com- manded lord Churchill to collect his troop of horse guards. He sent the duke of Grafton to take possession in his name of Tilbury fort. The assembly of peers adjourned to the council cham- ber at Whitehall; and, to give the appearance of legality to their meeting, chose the marquis of Halifax for their president. While this assembly was sitting, on the 13th Dec. a poor countryman, who had been engaged by James, brought an open letter from that unfortunate prince to London. It had no superscription; and it was addressed to none. It contained, in one sentence only, his deplorable condition when in the hands of a de- perate rabble. This poor messenger of their fallen sovereign had long waited at the council door, without being able to attract the notice of any who passed. The earl of Mulgrave at length, ap- prised of his business, had the courage to intro- duce him to the council. He delivered his open letter, and told the state of the king with tears. The assembly was so much moved, that they sent the E. of Feversham with 200 of the guards towards Feversham. His instructions were to rescue him first from danger, and afterwards to attend him to the sea coast, should he choose to retire. He chose, however, to return to London; but the prince of Orange sent a message to him, desiring him to ad- vance no nearer the capital than Rochester. The messenger missed James by the way. The king sent Feversham with a letter to the prince of O- range, requesting his presence in London to settle the nation. He himself proceeded to that place, and arrived on the 16th of December. Doubting the fidelity of the troops who were quartered at Westminster, he chose to pass through the city to Whitehall. Never prince returning with victory to his capital was received with louder acclama- tions of joy. All the streets were covered with bonfires. The bells were rung, and the air was rent with repeated shouts of gladness. All orders of men crowded to his coach; and when he ar- rived at Whitehall, his apartments were crowded with people who came to express their joy at his return. The prince of Orange received the news of his return with an haughty air. His aim from the beginning was to force him by threats and fe- verities to relinquish the throne. The Dutch guards were ordered to take possession of White- hall, and to displace the English. The king was soon after commanded, by a message which he re- ceived in bed at midnight, to leave his palace next morning, and to depart for Ham, a seat of the duchs of Lauderdale's. He desired, however, permission to retire to Rochester, a town near the sea coast, and opposite to France. This was readi- ly granted; and it was now perceived that the

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harsh measures of the prince had taken effect, and that the king meditated an escape to France. King James surrounded by the Dutch guards, arrived at Rochester on the 19th of December. The restraint put upon his person, and the manner in which he had been forced from London, raised the indignation of some, and the compassion of many. The English army, both officers and soldiers, began to murmur; and had it not been for the timidity of James himself, the nation would perhaps have returned to their allegiance. He remained three nights at Rochester, in the midst of a few faithful friends. The earls of Arran, Dumbarton, Ailesbury, Litchfield, and Middleton, were there; with the gallant lord Dundee, and other officers of merit. They argued against his flight with united efforts. Several bishops, some peers, and many officers, intreated his stay in some part of England. Message followed message from London. They represented that the opinions of men began to change, and that events would daily arise in favour of his authority. Dundee added his native ardour to his advice. "The question, Sir, (said he), is, Whether you shall stay in England, or fly to France? Whether you shall trust the returning zeal of your native subjects, or rely on a foreign power? Here you ought to stand. Keep possession of a part, and the whole will submit by degrees. Resume the spirit of a king. Summon your subjects to their allegiance. Your army, though disbanded, is not dispersed. Give me your commission. I will gather 10,000 of your troops. I will carry your standard at their head through England, and drive before you the Dutch and their prince." The king replied, "that he believed it might be done; but that it would raise a civil war, and he would not do so much mischief to a nation, that would so soon come to their senses again." Middleton urged his stay, though in the remotest part of the kingdom. "Your majesty (said he) may throw things into confusion by your departure; but it will be but the anarchy of a month: a new government will soon be settled, and you and your family will be ruined." These spirited remonstrances had no effect upon James. He resolved to quit the kingdom; and having communicated his design to a few of his friends, he passed at midnight through the back door of the house where he lodged, and with his son the duke of Berwick, and Biddulph one of his servants, went in a boat to a smack which lay waiting for him without the fort of Sheerness. By reason of a hard gale, they were forced to bear up toward Leigh, and to anchor on the Essex side, under the lee of the land. When the gale slackened, they reached the Buoy of the Narrows without tacking; but not being able to weather the Goodwin, they were forced to sail through the Downs. Seven ships lay there at anchor; but the smack passed unquestioned all along. Unable to fetch Calais, she bore away for Boulogne, and anchored before Ambleteuse. The king landed at three o'clock in the morning of Tuesday, Dec. 25th; and taking post, soon joined his queen at St Germain. James having thus abandoned his dominions, the prince of Orange remained master of them of course. By the advice of the house of lords, the

only remaining branch of the legislature, he was desired to summon a parliament by circular letters; but the prince, unwilling to act upon so imperfect an authority, convened all the members who had sat in the house of commons during an parliament of Charles II. and to these were added the mayor, aldermen, and fifty of the common council of London. The prince, thus supported, wrote circular letters to the counties and corporations of England to call a new parliament. The house being met, which was mostly composed of the Whig party, thanks were given to the prince of Orange for the deliverance he had brought them; after which they proceeded to settle the kingdom. A vote soon passed both houses, that king James II. having endeavoured to subvert the constitution of the kingdom, by breaking the original contract between the king and his people, and having by the advice of Jesuits and other wicked persons violated the fundamental laws, and withdrawn himself out of the kingdom, had abdicated the government; and that the throne was thereby vacant. The king being thus deposed, William easily got himself appointed his successor. Proposals were made for electing a regent. Others were for investing the prince of Orange with regal power, and declaring the young prince supposititious. To these proposals, however, William opposed the following decisive argument, viz. that "he had been called over to defend the liberties of the British nation, and that he had happily effected his purpose; that he had heard of several schemes proposed for the establishing of the government; that, if they chose a regent, he thought it incumbent upon him to inform them, that he would not be that regent; that he would not accept of the crown under the princess his wife, though he was convinced of her merits; that therefore, if either of these schemes was adopted, he would give them no assistance in the settlement of the nation; but he would return home to his own country, satisfied with his share to secure the freedom of theirs." Upon this, after a long debate in both houses, a new sovereign was preferred to a regent by a majority of two voices. It was agreed, that the prince and princess of Orange should reign jointly as king and queen of England; while the administration of government should be placed in the hands of the prince only. The marquis of Halifax, as speaker of the house of lords, made a solemn tender of the crown to their highnesses, in the name of the peers and commons of England. The prince accepted the offer; and that very day, Feb. 13th, 1689, William and Mary were proclaimed king and queen of England.

(64.) ENGLAND, HISTORY OF, TO THE SCOTCH CONVENTION. Though Mary had a share of the royal title, and her name and effigy were inscribed upon the coin along with those of William, she never possessed either the authority of a queen, or the influence of a wife. Her easy temper had long been subdued by the stern severity of a husband, who had very few amiable qualities. Being brought up in a manner under the tuition of her spouse, and in some degree confined by his orders, she was accustomed to adopt implicitly his political maxims and even his thoughts; and in consequence

sequence of her want of importance with him, he ceased to be an object of consequence in the eyes of the nation. William III. began his reign with issuing a proclamation for continuing in office all Protestants that had been in place on the 1st of the preceding December. On the 17th he formed his privy council, which consisted chiefly of such persons as had been most active in raising him to the throne. To gratify as many as possible of his friends, the several boards, and even the chancery, were put into commission.—The benches of the exchequer and common law were filled with persons who had distinguished themselves against the measures of the late king. The earl of Nottingham who had violently opposed the elevation of William, and the earl of Brewhur, who had adhered to his views, were made secretaries of state. The marquis of Halifax, and the earl of Danby, though rivals in popularity, were admitted into the cabinet; the first as privy seal, the second as president of the council. His Dutch friends in the mean time were not forgotten by the king. Bentinck, his favourite, was made a privy councillor, groom of the stole and privy purse. Auverquerque was appointed master of the horse. Zuylstrein received the office of master of the robes. Schomberg was placed at the head of the ordnance. Though these instances of gratitude were no doubt necessary

William, the generality of the nation were dissatisfied. The Tories were offended at being excluded from his favour, especially as they had parted from their principles to serve him. The Tories in general were much prejudiced against Catholics, and universal discontent ensued upon seeing them preferred. The king, who had been educated a Calvinist, was also very strongly inclined to favour that sect; and his prejudices in favour of Calvinism were almost equal to those of James in favour of Popery. Finding, therefore, the clergy of the church of England little inclined to take oaths to the new government, he began openly to indulge his own prejudices in favour of dissenters. Having come to the house of lords to introduce some bills, on the 16th March, he made a speech, urging the necessity of admitting all Protestants indiscriminately into the public service. He told his parliament, that he had something to communicate, which would conduce as much to their interest, as to the disappointment of their enemies. He informed them, that he was employed in filling up the vacancies in offices of trust; and hoped, that they were sensible of the necessity of law, to settle the oaths to be taken by such persons as should be admitted into place. As he stated not, he said, that they would sufficiently provide against Papists, so he hoped that they would leave room for the admission of all Protestants that were able and willing to serve. This insoluble proposal was rejected with vehemence. The adherents of the church complained, that the law which they feared from the Papists in the preceding reign, was now to be dreaded from the dissenters. They affirmed, that if the established religion was to be destroyed, it mattered little by whose hands it must fall. A bill brought in by the ministry for abrogating the for-

mer oaths of supremacy and allegiance was rejected. An attempt to dispense with the sacramental test was made without success in another form. The court party proposed, that any man should be sufficiently qualified for any office, by producing a certificate of his having received the sacrament in any Protestant congregation. But this reasonable motion was also rejected in the house of lords by a great majority. William repeated his attempts of a comprehension; but he was ultimately unsuccessful, and in the coronation oath, the church party inserted a clause highly favourable to themselves, viz. that the king should maintain the Protestant religion "as established by law." To this clause William is said to have discovered an apparent unwillingness to swear. For these and other reasons, the government of William was for some time but in a very tottering condition. The king, either thro' want of health or inclination, interfered but little in the affairs of the nation. Ireland was strangely neglected. Halifax and Danby, who had in a manner raised the king to the throne, caballed with his enemies. They perceived that the people were beginning to be discontented with their new prince. Every thing seemed to tend to a change. Halifax himself declared, that were James to conform with the Protestants, he could not be kept 4 months from reascending his throne. Danby averred, that, were the late king to give satisfaction for the security of religion, it would be difficult to oppose his restoration. From these apparent discontents of the nation, the friends and emissaries of James assumed more boldness. They tampered with the servants of the crown, and inflamed the army. The former they alarmed with the prospect of a sudden change; the latter they roused into indignation by the manifest preference given by William to his countrymen the Dutch. Though the kingdom of Scotland did not at first recognize the authority of William, yet the party of James never attained sufficient strength to be of any effectual service to him in that kingdom. Thirty Scots peers, and near 80 gentlemen, then in London, had waited in the beginning of January on the prince of Orange. Without any authority from the regency still subsisting in Edinburgh, they formed themselves into a kind of convention. The prince of Orange, in a formal manner, asked their advice. He withdrew, and they adjourned to the council chamber at Whitehall. The duke of Hamilton being chosen president, explained the distracted state of Scotland. He represented, that disorders, anarchy, and confusion, prevailed; and he urged the necessity of placing the power somewhere, till a convention of states should be called to form a lasting and solid settlement. When the heads of their address to the prince of Orange were settled, and ordered to be ingrossed, the E. of Arran unexpectedly arose, and proposed to invite back the king. The meeting, however, adhered to the prince of Orange; and waited on him in a body, requesting him to take the administration into his hands. He thanked them for the trust they had reposed in him, and a convention was ordered to meet at Edinburgh on the 14th of March; and it was provided

that no exception or limitation whatever should be made, except that the members should be Protestants. A secession, however, was made from this convention, in favour of James. The Abp. of Glasgow, the earl of Balcarra, and the viscount Dundee, were authorized by an instrument signed by the late king, at that time in Ireland, to call a convention of the states at Stirling. But this measure was disappointed, first by the wavering disposition of the marquis of Athol, and afterwards by the delay and folly of the party. At last, the viscount Dundee, being alarmed by an information of a design formed by the covenanters to assassinate him, left Edinburgh at the head of 50 horse. When he passed under the walls of the castle, the duke of Gordon, who held that place, and favoured the cause of James, called him to a conference. He scrambled up the precipice, and informed the duke of his designs in favour of the late king. He conjured him to hold out the castle, under a certainty of being relieved. The novelty of the fight collected multitudes of spectators. The convention were alarmed. The president ordered the doors to be locked, and the keys to be laid upon the table. The drums were beat to alarm the town. A parcel of ill-armed retainers were gathered together in the street by the earl of Leven. Dundee in the mean time rode off with his party. But when they found themselves secure, the duke of Hamilton adjourned the convention, which relieved the adherents of James from dreadful apprehensions for their own safety. Fifty members retired from Edinburgh; and that circumstance procured an unanimity in all the succeeding resolutions of the convention. Soon after this, it was determined in a committee, that James had *forefaulted* his right to the crown, by which was meant that he had perpetually excluded himself and his whole race from the crown, which was thereby become vacant. This resolution was approved by the convention, and another was drawn up for raising William and Mary to the vacant throne; in consequence of which they were proclaimed at Edinburgh on the 11th of April 1689.

(65.) ENGLAND, HISTORY OF, TO THE SIEGE OF LONDONDERRY. The castle of Edinburgh was still kept, in the name of James, by the duke of Gordon: but despairing of any relief, and pressed by a siege, he surrendered it on the 13th of June, upon honourable terms. The adherents of James, terrified with this unexpected misfortune, now turned their eyes to the viscount Dundee. That nobleman having been in vain urged by the convention to return, they had declared him a fugitive, an out-law, and a rebel. General Mackay had been sent to Scotland by William, with four regiments of foot, and one of dragoons; and Dundee, being apprised of his design to surprise him, retired to the Grampian mountains with a few horse. He marched from thence to Gordon castle, where he was joined by the earl of Dunfermline with 50 gentlemen. He then passed through the county of Murray to Inverness. Macdonald of Keppoch lay with 700 men before that town; after having ravaged, in his way from his own country, the lands of the clan of Macintosh. Dundee having promised to the magistrates of In-

verness to repay, at the king's return, the money extorted from them by Macdonald, induced the latter to join him with all his men. He could not prevent them, however, from first returning home with their spoil. He accompanied them to Lochaber, and on the 8th of May arrived in Badenoch. From thence he wrote letters to the chiefs of all the clans, appointing them to meet at a general rendezvous in Lochaber, on the 18th of the same month. In the mean time, passing suddenly through Athol, he surprised the town of Perth. In hopes of gaining to his party the two troops of Scots dragoons who lay at Dundee, he marched suddenly to that place: but the fidelity of captain Balfour, who commanded them, disappointed his views. Having raised the land tax as he passed, Dundee returned through Athol and Rannoch to hold the diet of rendezvous at Lochaber. Here he was reinforced by several Highland chieftains, so that his army amounted to 1500 men. He pursued Mackay for four days, who had advanced to Inverness, but afterwards retreated to Strathbogie, leaving the whole Highlands exposed to the enemy. Soon after, however, Dundee found himself surrounded with many difficulties. The officers of the Scots dragoons, who held a secret correspondence with him, wrote him false intelligence, as an excuse for their own fears. On this, Dundee retreated to Badenoch. The natives of the low country who served in his army, quitted him without leave; and the Highlanders plundered the country wherever they came: at last he himself fell sick, while Mackay hovered on his rear. A slight skirmish happened, in which the Highlanders prevailed; but they lost their baggage during the action. Dundee at length arrived at Ruthven; but Mackay being reinforced with a body of 1200 men advanced against him, and the two regiments had arrived at Perth and Dunblain. The Highlanders now deserted every night by hundreds; their gallant leader himself was obliged to retire to Lochaber, where only 200 of his whole force remained with him; and to complete his misfortunes, he received at same time news of the surrender of the castle of Edinburgh. On the 23d of June, letters arrived from king James, with a promise of immediate succours from Ireland upon which Dundee ordered the neighbouring clans to assemble round his standard. But he had scarce any thing but the mere bodies of men with which he could prosecute the war. The Highlanders were armed only with their own proper weapons, and he had no more than 40 pounds of powder in his whole army. All difficulties, however, were surmounted by the active spirit of the general, for whom the army entertained an enthusiastic zeal. On the 17th July, he met the king's forces under general Mackay, near the pass of Killcranky. An engagement ensued, in which the Highlanders were victorious. Two thousand of Mackay's men were lost either in the field or in the pursuit; but the victory cost the Highlanders very dear, for their brave general was mortally wounded. He survived the battle, however; and wrote an account of the victory to king James: he even imagined his wound was not mortal; but he died the next morning at Blair. With him ended all the hopes of James in Scotland. Col-

Canon, who succeeded Dundee in the command, possessed neither his popularity nor his abilities. After some insignificant actions, in which the valour of the soldiers was more conspicuous than the conduct of their leader, the Highlanders fell in disgust; and the war soon after ended honourably for William, without any repulse given to his enemies. During the troubles in England, which had terminated in placing William on the throne, the two parties in Ireland were kept in a state of tranquillity by their mutual fears. The Protestants were terrified at the prospect of another massacre; and the Papists expected every day to be invaded by the joint forces of the English and Dutch. Their terrors, however, were founded; for though Tyrconnel sent several messages to the prince, that he was ready to deliver up the kingdom to any force that might make a reasonable demand, his offers were always rejected. William was persuaded by the marquis of Halifax, that Ireland should yield, no pretence could remain for keeping an army in pay; that then, having no army to protect his authority, he might easily be turned out as he had been brought in; that the English nation could never remain long in a state of good humour; and that he might receive they already began to be discontented. These insidious arguments induced William to treat Ireland in such a manner, as is justly looked on to be one of the greatest blemishes in his reign, except the execrable transactions at Glencoe and Glenco. His enemies, indeed, though happy without any good foundation, assign a still worse; viz. that should England be dissolved under his government, Ireland could not long hold out; and that the obstinacy of his enemies would give a pretence for forfeitures to gratify his English, but especially his foreign friends. Tyrconnel, disappointed in his views of rendering Ireland to the prince of Orange, affected to adhere to James. The whole military force of the kingdom at that time amounted only to 6000 men, and of these only 600 were in Dublin; and what was still worse, all of them were so much disposed to quit the service, that the lord deputy was obliged to issue commissions for levying new forces. Upon this, an half-armed rabble, more than an army, rose suddenly in various parts of the kingdom. Having no pay from the king, and subsisted by depredation, and regarded no discipline. The Protestants in the north armed themselves in their own defence; and the city of Londonderry, relying on its situation, and a slight fort, shut its gates against the new raised army. The Protestant parties in the mean time rose every where, declaring their resolution to unite in self-defence, to preserve the Protestant religion, and to continue their dependence on England, and to oppose the meeting of a free parliament. To these appearances, William now sent general Milnes, an Irishman and a Roman catholic, to treat with Tyrconnel; but instead of persuading him to yield to William, this messenger added to his adherence to James. In the mean time Tyrconnel himself assured the lord deputy, that he was ready to sail from Breff with a powerful armament. Hamilton, assuming spirit from the success of this aid, marched against the northern

insurgents. They were routed with considerable slaughter at Drumore; and Hillsborough, where they had fixed their head quarters, was taken without resistance: the city of Londonderry, however, resolved to hold out to the last extremity. On the 7th of March, 1689, James embarked at Breff. The whole force of his expedition consisted of 14 ships of war, 6 frigates, and 3 fire ships: 1200 of his native subjects in the pay of France, and 100 French officers, composed the whole army of James. He landed at Kinsale without opposition on the 12th of the month, where he was received with the utmost demonstrations of joy. His first care was to secure, in the fort of Kinsale, the money, arms, and ammunition, which he brought from France; and put the town in some posture of defence: which having done, he advanced to Corke. Tyrconnel arrived at this place soon after, and brought intelligence of the rout at Drumore. The king was so much pleased with his attachment and services, that he created him a duke; after which he himself advanced towards Dublin. The condition of the multitude, who poured round him under the name of an army, was not calculated to raise his hopes of success. The most of them were only provided with clubs; some had sticks tipped with iron; and even of those who were best armed, scarce two in a hundred had muskets fit for service. Their very numbers distressed their sovereign, and ruined the country; insomuch that James resolved to disband the greatest part of them. More than 100,000 were already on foot in the different parts of the island. Of these he reserved 14 regiments of horse and dragoons, and 35 regiments of foot; the rest he ordered to their respective homes, and armed those that were retained in the best manner he could. Being received at Dublin with an appearance of universal joy, James proceeded immediately to business. He ordered, by proclamation, all Protestants who had abandoned the kingdom to return. He commanded, in a second proclamation, all Papists, except those in his army, to lay up their arms, and put an end to the robberies and depredations which they had committed in the excess of their zeal. He raised the value of the currency by a proclamation; and he summoned a parliament to meet on the 7th of May, to settle the affairs of the kingdom. The Protestant clergy represented their grievances in an address; and the university of Dublin appeared with complaints and congratulations. He assured the first of his absolute protection, and a full redress; and he promised the latter not only to defend, but even to enlarge, their privileges. On the 8th of April, James left Dublin, resolving to lead his army against the insurgents in person. They retired before him, and the king laid siege to Londonderry. The besieged made such a vigorous resistance as has made the place remarkable ever since; (See LONDONDERRY.) but being reduced to the last extremity, they would have been obliged to surrender, had they not been relieved on the 28th July, by 7 ships laden with provisions; upon which the siege was immediately raised.

(66.) ENGLAND, HISTORY OF, TO THE SIEGE OF LIMERICK. The distressed situation of James, and his absolute dependence upon France, now

drove him into measures which otherwise he never would have thought of. His soldiers for some time had been supported by their officers, or subsisted by depredation. The funds of the officers were at last exhausted, and the country itself could no longer bear the riot and injustice of the soldiers. Pressed by these difficulties, James, by the advice of his council, resolved to coin pieces of copper, which should be received for silver. He saw the inconveniences of this measure; but all Ireland possessed not the means of paying the army in current coin to the middle of June. Of the French remittances only 200,000 livres remained; and the king found it absolutely necessary to reserve that sum, to forward his measures with regard to Britain, and to procure intelligence of the motions of his enemies. The army was satisfied even with this appearance of money, and the people received the fictitious coin in hopes of being repaid in a more favourable state of affairs. A tax of 20,000*l.* a month, granted for 13 months by the parliament, furnished government with an appearance of resources; and in the mean time the king endeavoured to support the former revenue. He opened a trade with France to supply the want of commerce with England. But the French, knowing their own importance, and the necessity of the unfortunate monarch's affairs, claimed and obtained advantages in traffic which offended his own subjects. To add to the distress of James, Ireland was now invaded by 10,000 men under the command of the duke of Schomberg. They appeared on the 12th of August, 1689, in 90 transports, on the coast of Donaghadee. Next day Schomberg landed without opposition his army, horses, and train of artillery. Having marched to Belfast on the 15th, he continued in that place 4 days to refresh his troops. He invested Carrickfergus, and threw into it 2000 bombs, which laid the houses in ashes. The garrison having spent their powder to the last barrel, marched out with all the honours of war. But Schomberg's soldiers broke the capitulation. They disarmed and stripped the inhabitants, without regard to sex or quality; even women, stark naked, were publicly whipped between the lines; and all this under pretence of cruelties of the same kind having been committed by the Papists. Though Schomberg was an experienced general, who had passed a life of 80 years almost continually in the field, he found himself at a loss how to carry on the war in Ireland. He did not consider the dangers that threatened the health of his troops by confining them too long in one place; and he kept them in a low moist camp near Dundalk, almost without firing of any kind; so that the men fell into fevers and fluxes, and died in great numbers. The enemy were not less afflicted with similar disorders. Both camps remained for some time in sight of each other; and at last, the rainy season approaching, both armies quitted their camps at the same time, and retired into winter quarters. The bad success of the campaign, and the miserable state of the Protestants in Ireland, at length induced William to attempt their relief in person. Accordingly he left London on the 4th of June 1690, and arrived at Carrickfergus on the 14th of

that month. From thence he passed to Lisburn, the head quarters of the duke of Schomberg. He reviewed at Lough Britland his army, which consisted of 36,000 men, and was composed of English, Dutch, Germans, Danes, and French. Being supplied with every necessary, and in high health and spirits, they seemed absolutely certain of victory. The Irish army, having abandoned Ardee at their approach, fell back to the S. of the Boyne. On the bank of that river they were joined by James, who had marched from Dublin at the head of his French auxiliaries. The banks of the Boyne were steep; the south side hilly, and fortified with ditches. The river itself was deep, and it rose very high with the tide. These advantages induced James, contrary to the opinion of his officers, to keep possession of this post. His army was inferior in numbers, discipline, and every thing, to his enemies: but slight, he thought, would dispirit his troops, and tarnish his own reputation; he therefore resolved to put the fate of Ireland on the issue of a battle. Urged by his friends in England, and encouraged by a projected invasion of that kingdom by France, he had resolved to quit Ireland; and to this he was further encouraged by the assurance of aid from a powerful fleet that had already entered the narrow seas. But the strength of his situation, and the sudden appearance of the enemy, which made even a retreat dangerous, induced him to defer his purpose. William was no sooner arrived, than he rode along the river's side, in sight of both armies, to make proper observations on the point of battle; but in the mean time, being perceived by the enemy, a cannon was privately brought out and planted against him where he was sitting. The shot killed several of his followers, and he himself was wounded in the shoulder. The news of his being slain was instantly propagated through the Irish camp, and even sent off to Paris; but William, as soon as his wound was dressed, rode through the camp, and quickly undeceived his army. The next day, June 30th, the battle began at 6 A. M. James's forces behaved with great resolution, but were at last defeated with the loss of 1500 men. The Protestants lost only about one third of that number; but among them was their brave general the duke of Schomberg. He was killed by a discharge from his own troops, who, not knowing that he had been accidentally hurried into the midst of the enemy, fired upon the body of men who surrounded him. During the action, James stood on the hill of Donnamur surrounded with some squadrons of horse; and at intervals was heard to exclaim, when he saw his own troops repulsing those of the enemy, "O spare my English subjects!" While his troops were yet fighting, he quitted his station; and leaving orders to guard the pass at Duleek, made the best of his way to Dublin. He advised the magistrates of that city to make the best terms they could with the victors; and he himself set out for Waterford, where he immediately embarked for France. When he first deserted his troops at the Boyne, O'Regan, an old Irish captain, was heard to say, "That if the English would exchange generals, the conquered army would fight them

em over again." The victory at the Boyne was no means decisive, and the friends of James solved to continue their opposition to William. Sarsfield, a popular and experienced general, put himself at the head of the army that had been routed at the Boyne, and went farther into the country to defend the banks of the Shannon. James pointed one St Ruth to command over Sarsfield, which gave the Irish universal discontent. On the other hand, general Ginkle, who had been appointed to command the English army in the absence of William, who was gone over to England, advanced towards the Shannon to meet the enemy. The only place where it was fordable was Athlone, a strong walled town built on both sides of the river, and in the hands of king James's party. The English soon made themselves masters of that part which was on the hither side of the river; but the part on the opposite bank being vigorously defended, was long thought impregnable. At length it was resolved in a council of war, that a body of troops should ford the stream in the face of the enemy: and this desperate enterprise was performed with great resolution; the enemy were driven from their works, and the town surrendered at discretion. St Ruth marched his army to its relief, but he came too late; for he no sooner approached, than his own guns were turned against him: upon which he instantly marched off, and took post at Aughrim, at ten miles distance, where he determined to wait the English army. Ginkle did not decline the combat, though he had only 1000 men, while the Irish were above 25,000 strong. A desperate engagement ensued; but at St Ruth being killed, his troops gave way on all sides, and retreated to Limerick, where they determined to make a final stand, after having lost 10,000 of their best men. Ginkle, wishing to put an end to the war at once, suffered as many of the Irish as chose, to retire to Limerick. In the last retreat the Irish forces made a brave defence.

67.) ENGLAND, HISTORY OF, TO THE SHOCKING MASSACRE AT GLENCO. The siege of Limerick commenced Aug. 25th 1691. Six weeks were spent before the place without any decisive result. The garrison was well supplied with provisions, and provided with all means of defence. The winter was approaching, and Ginkle had orders to finish the war upon any terms. He therefore offered such conditions, as the Irish, had they been victors, could scarce have refused with prudence. He agreed, that all in arms should receive pardon: that their estates should be reformed: their attainders annulled, and their outlawries reversed: that none should be liable for debts incurred through deeds done in the course of hostilities: that all Roman catholics should enjoy the same toleration with regard to their religion, as he reign of Charles II. that the gentry should be permitted to make use of arms: that the inferior should be allowed to exercise their callings and professions: that no oaths but that of allegiance should be required of high or low: that no soldiers, or any number of them, should be sent into any foreign service, they should be conveyed to the continent, at the expence of the government. Sarsfield, who had obtained the title of

earl of Lucan from James after his abdication, was permitted to retain a dignity which the laws could not recognise. The lords justices had arrived from Dublin on the first of October. They signed the articles together with Ginkle; and thus the Irish Papists put a happy period to a war which threatened their party with absolute ruin. In consequence of this treaty, about 14,000 of those who had fought for king James went over to France, having transports provided by government for conveying them thither. When they arrived, James thanked them for their loyalty, and told them that they should still fight for their old master; and that he had obtained an order from the king of France for their being new clothed, and put into quarters of refreshment. In this manner all James's expectations from Ireland were entirely frustrated, and the kingdom submitted quietly to the English government. In the beginning of 1692, an action of unexampled barbarity disgraced the government of William in Scotland. In the preceding August, in consequence of a pacification with the Highlanders, a proclamation of indemnity had been issued to such insurgents as should take the oaths to the king and queen, on or before the last day of December. The chiefs of the few tribes who had been in arms for James complied soon after with the proclamation: but Macdonald of Glenco failed in submitting within the limited time; more, however, from accident than design. In the end of December, he came to colonel Hill, who commanded the garrison in Fort William, to take the oaths of allegiance to the government. Hill having furnished Macdonald with a letter to Sir Colin Campbell, sheriff of the county of Argyle, directed him to repair immediately to Inverary, to make his submission in a legal manner before that magistrate. The way to Inverary lay through almost impassable mountains; the season was extremely rigorous, and the whole country covered with a deep snow. So eager, however, was Macdonald to take the oaths, before the limited time should expire, that though the road lay within half a mile of his own house, he would not stop to visit his family. After various obstructions he arrived at Inverary. The time was elapsed, and the sheriff hesitated to receive his submission; but Macdonald prevailed upon him by his importunities, and even tears. Sir John Dalrymple, afterwards earl of Stair, attended king William as secretary of state for Scotland. He took advantage of Macdonald's neglecting to take the oaths within the time prescribed, and procured from the king a warrant of military execution against him and his whole tribe. As a mark of his own eagerness, or to save Dalrymple, William signed the warrant, both above and below, with his own hand. The secretary, in letters expressive of a brutal ferocity of mind, urged the officers who commanded in the Highlands to execute their orders with the utmost rigour. Campbell of Glenlyon, a captain in Argyle's regiment, and two subalterns, were ordered with 120 men to repair to Glenco on the first of February. Campbell, being uncle to young Macdonald's wife, was received by the father with all manner of friendship and hospitality. The men were treated in the houses of his tenants with free quarters and

kind entertainment. Till the 13th of the month, the troops lived in good humour and familiarity with the people. The officers on the very night of the massacre passed the evening and played at cards in Macdonald's house. In the night, lieutenant Lindsay, with a party of soldiers, called in a friendly manner at his door. He was instantly admitted. Macdonald, as he was rising to receive his guest, was shot dead behind his back with two bullets. His wife had already put on her clothes; but she was stripped naked by the soldiers, who tore the rings off her fingers with their teeth. The slaughter was now become general. To prevent the pity of the soldiers to their hosts, their quarters had been changed the night before. Neither age nor infirmity was spared. Some women, in defending their children, were killed; boys, imploring mercy, were shot by officers, on whose knees they hung. In one place, nine persons, as they sat enjoying themselves at table, were shot dead by the soldiers. At Inveriggen, in Campbell's own quarters, 9 men were first bound by the soldiers, and then shot at intervals, one by one. Near 40 persons were massacred by the troops. Several who fled to the mountains perished by famine and the inclemency of the season. Those who escaped owed their lives to a tempestuous night. Lieutenant colonel Hamilton, who had the charge of the execution from Dalrymple, was on his march with 400 men, to guard all the passes from the valley of Glenco; but was obliged to stop by the severity of the weather, which proved the safety of the rest of the tribe. He entered the valley next day; laid all the houses in ashes; and carried away all the cattle and spoil, which were divided among the officers and soldiers. It can scarce be imagined that a massacre, attended with such circumstances of treachery and breach of the laws of hospitality, could pass without severe animadversion; though the expressions of Cunningham, a writer very partial to the character of king William, seem to account it a fault that it should ever have been inquired into. "Mr James Johnstone, one of the secretaries of state (says he), from motives of revenge, caused the affair of Glenco to be laid before parliament. This being somewhat disingenuously managed, was the occasion of much trouble to many people. The earl of Breadalbin was committed to the castle of Edinburgh: but the lord viscount Stair, who lay under some suspicion on that account, in a very artful speech, endeavoured to resolve the whole matter into a misapprehension of dates; which, he alleged, had led both the actor in the slaughter complained of, and those who now accused him, into mistakes. In conclusion he affirmed, that neither the king nor any other person was to be blamed, save only the misled captain, who did not rightly understand the orders that had been given him." The most disgraceful circumstances of the massacre are by the same author concealed; as he only tells us, that "it unhappily fell out, that the whole clan of Glenco, being somewhat too late in making their submission to king William, were put to the sword by the hands and orders of captain Campbell; which gave great offence to the king. It is certain the king had cause of resentment against some of his courtiers, on account of

this foul action; but he thought fit not to question them for it, till he could settle himself more firmly on the throne."

(68.) ENGLAND, HISTORY OF, TO THE TOTAL DESTRUCTION OF THE SETTLEMENT AT DARIEN. It has been supposed, that it was partly to efface the remembrance of this massacre, and the sham inquiry above mentioned, that the king caused his commissioner to declare in the Scots parliament (the same that had inquired into the affair of Glenco), "That if the members found it would tend to the advancement of trade, that an act should be passed for the encouragement of such as should acquire and establish a plantation in Africa, America, or any other part of the world where plantations might be lawfully acquired, that his majesty was willing to declare he would grant to the subjects of this kingdom, in favour of these plantations, such rights and privileges as he granted, in like cases to the subjects of his other dominions." Relying on this and other flattering promises, the nobility and gentry of Scotland advanced £400,000 towards the establishment of a company for carrying on an East and West India trade; and 1200 veterans, who had served in king William's wars, were sent to effect a settlement on the peninsula of Darien, which lies between the Atlantic and Pacific oceans, and in the narrowest place is not above 60 miles over; and of consequence is equally well adapted for trading with both the Indies. The new colony were well received by the natives, and matters began to look a promising aspect, when the king, on the earnest solicitations of the English and Dutch East India companies, resolved to gratify the latter at the expence of his Scottish subjects; and knowing that the new colony must want supplies of provisions, he sent orders to the governor of Jamaica and the English settlements in America, to issue proclamations prohibiting, under the severest penalties, all his majesty's subjects from holding any correspondence with the Scottish colony, or assisting in any shape with arms, ammunition, or provisions: "Thus (says Mr Knox) the king's heart was hardened against these new settlers, whom he abandoned to their fate, though many of them had been covered with wounds in fighting his battles. Thus vanished all the hopes of the Scottish nation, which had engaged in this design with incredible alacrity, and with the most sanguine expectations that the misfortunes of their country would, by this new channel of commerce, be completely healed. The distresses of the people, upon receiving authentic accounts of the fortune of their colony, scarcely admit of any description. They were not only disappointed in their expectations of wealth and a renewal of their commerce, but hundreds, who had ventured their all, were absolutely ruined by the miscarriage of their design. The whole nation seemed to join in the clamour that was raised against their sovereign. They taxed him with double dealing, inhospitality, and base ingratitude, to a people who had lavished their treasure and best blood in support of his government, and in the gratification of his ambition; and had their power been equal to their treachery, in all probability the island would have been involved in a civil war." See Sir J. Dalrymple's

ple's authentic account of this disgraceful action, with his judicious reflections on the fact, under the article DARIEN, N^o I. § 1, 1—5. 69.) ENGLAND, HISTORY OF, TO THE VICTORY OVER THE FRENCH FLEET OFF LA HOGUE. A total reduction of Ireland, and the dispersion and extermination of the Highland chieftains who opposed his cause, did not entirely put an end to the hopes of James. His chief expectations next were founded on a conspiracy among his English adherents, and in the succours promised him by the French king. A plot was first formed in Scotland by Sir James Montgomery; a person who, not being an adherent to William, now turned against him; but as the project was ill contrived, it was as lightly discovered by the instigator. This another succeeded, which seemed to threaten serious consequences, as it was managed by the whig party, who were the most formidable to the state. A number of these joined themselves to the Tories, and both made advances to the admirals of the late king. They assembled together; and the result of their deliberations was, the restoration of James was to be effected entirely by foreign forces: that he should sail for Ireland, and be there joined by 5000 Swedes; because they were of the Protestant religion, and, it was thought, remove a part of the odium which attended an invasion by foreigners: it was concerted that assistance should at the same time be sent from France, and that full liberty of conscience should be proclaimed throughout the kingdom. To save time, it was resolved to send to France two trusty persons to consult with the banished monarch; and lord Preston and Mr. Ashton were appointed for this embassy. Both, however, were seized when they least expected it, by order of lord Caermarthen. Both were condemned; and Ashton was executed without making any confession; but lord Preston had the same resolution. Upon an offer of pardon, he discovered a great number of his associates; among whom the duke of Ormond, lord Dartmouth, and lord Clarendon, were the chief. The chief at last became sensible of their bad policy, and having better supported the cause of James, were therefore resolved to make a descent upon Ireland in his favour. In pursuance of this scheme, the French king supplied James with an army consisting of a body of French troops, some English Scots refugees, and the Irish regiments, which had been transported into France from Limerick, were now become excellent soldiers by long discipline and severe duty. This army was assembled between Cherbourg and La Hogue, and commanded by king James in person. More than 100 transports were provided for landing it on the Irish coast; and Tourville, the French admiral at the head of 63 ships of the line, was appointed to favour the descent. His orders were, in all events, to attack the enemy, in case they should oppose him; so that every thing promised banished king a change of fortune. These preparations were soon known at the English court, and every precaution taken for a vigorous defence. All the secret machinations of the banished king's adherents were discovered to the ministry by spies; and by these they

found, that the Tories were more faithful than even the Whigs who had placed king William on the throne. The duke of Marlborough, lord Godolphin, and even the princess Anne herself, were violently suspected of disaffection. Preparations, however, were made with great tranquillity and resolution, to resist the growing storm. Admiral Russel was ordered to put to sea with all possible expedition; and he soon appeared with 99 ships of the line, besides frigates and fire-ships. At the head of this formidable fleet he set sail for the coast of France; and, near La Hogue, he discovered the enemy under Tourville, who prepared to give him battle. The engagement began between the two admirals, with great fury, on Thursday morning, May 19th 1692; and the rest of the fleet soon followed their example. The battle lasted for ten hours; but at last victory declared on the side of numbers: the French fled for Conquet road, having lost 4 ships in the first day's action. The pursuit continued for two days; 3 French ships of the line were destroyed the next day; and 18 more, which had taken refuge in the bay of La Hogue, were burnt by Sir George Rooke. Thus were all the French preparations frustrated; and so decisive was the blow, that from this time France seemed to relinquish all claims to the ocean.

(70.) ENGLAND, HISTORY OF, UNTIL THE DEATH OF Q. MARY II. This decisive victory over the French fleet put an end to the hopes of James. No further attempts were made in his favour, except some plots to assassinate king William, which ended only in the destruction of those who formed them. But it was never proved, that James countenanced these plots in the least; it rather appears, that in all cases he expressed the utmost abhorrence of such attempts. In 1697, the abbe de Polignac, ambassador from France in Poland, wrote to his master, that thoughts were entertained of the late king of Britain, in the new election which happened on the death of John Sobieski king of Poland; and that James had been already named by some of the diets as his successor. Lewis XIV. was eager to seize an opportunity of ridding himself with honour of a prince whose pretensions he could no longer support. The friends of James were also sanguine for the project; but he himself refused it. He told them, that "he would ever retain a grateful remembrance of his friends in Poland. That, however, he would not accept of the crown, had it actually been offered; much less would he endeavour to obtain by solicitation any crown which was not actually his due. That his acceptance of any other sceptre would amount to an abdication indeed of that which he deemed his right. That therefore he was resolved to remain in his present forlorn condition, possessing less hopes than ever of being restored, rather than to do the least act of prejudice to his family." The same year, at an interview between king William and Lewis, the latter proposed that the prince of Wales, James's son, should succeed to the throne of England after the death of William. The king with little hesitation agreed to this request. He even solemnly engaged to procure the repeal of the act of settlement; and to declare, by another, the prince

prince of Wales his successor to the throne. Even this proposal was rejected by James. He told the king of France, that though he could suffer with patience the usurpation of his nephew upon his right, he would never permit his own son to be guilty of the same injustice. He urged, that should the son reign in his father's lifetime, that circumstance would amount to a formal renunciation. That the prince of Wales, by succeeding to the prince of Orange, would yield his sole right, which was that of his father, &c. From this time James lost every hope of his restoration, and resigned himself entirely to the austerities of religious enthusiasm. His constitution, though vigorous and athletic, had for some time begun to yield to the infirmities of age, and to that melancholy which superstition, as well as his uncommon misfortunes, had impressed on his mind. In the beginning of September 1701, when he was, according to his daily custom, at public prayers, he fell suddenly into a lethargy; and though he recovered his senses soon after, he languished for some days, and expired on the 6th of September. The French king, with great humanity, paid him several visits during his sickness; and exhibited every symptom of compassion, affection, and respect. Lewis, being under a difficulty how to proceed upon the now expected death of James, called a council to take their advice, whether he should own the prince of Wales as king of Great Britain and Ireland. He had hesitated long in this delicate point. But the dauphin, the duke of Burgundy, and all the princes of the blood, declared, that it was unbecoming the dignity of the crown of France, not to own that the titles of the father devolved immediately upon the son. Lewis approved of this resolution, and determined to acquaint the dying king with it in person. When he arrived at St Germain, he acquainted first the queen, and then her son, of his design. He then approached the bed in which James lay almost insensible with his disorder. The king, rousing himself, began to thank his most Christian majesty for all his favours; but Lewis interrupted him:—"Sir (said he), what I have done is but a small matter; but what I have to say is of the utmost importance." The people then began to retire. "Let no person withdraw, said Lewis. I come to acquaint you, Sir, that when God shall please to call your majesty from this world, I shall take your family under my protection, and acknowledge your son, as he then will certainly be, king of Great Britain and Ireland." Though the defeat of the French fleet at La Hogue had put king William out of all danger from any further attempts from that quarter, he by no means possessed his throne with tranquillity. The want of a common enemy produced dissensions among the people, and William began to find as much uneasiness from his parliament at home, as from an enemy in the field. The uneasiness he felt from the refractory disposition of his subjects was not a little heightened by the death of his queen, who was taken off by the small-pox on the 28th Dec. 1694. For some time he was under a sincere concern for her loss; but he soon lost all other concerns in the greatness of his apprehensions for the

balance of power, and the fluctuating interests of Europe.

(71.) ENGLAND, HISTORY OF, UNTIL THE DEATH OF WILLIAM III. AND ACCESSION OF Q. ANNE. K. William's chief motive for accepting the crown was to engage England more deeply in the concerns of Europe. His great object had been to humble the French, and all his politics consisted in forming alliances against them. And it must be owned, that the power of the French monarchy was never more formidable than under Lewis XIV. at this period. On the other hand, many of the English had as much animosity against the French. These, therefore, considered the interest of the nation as sacrificed to foreign connections; and complained that the continental war fell most heavily on them though they had the least interest in its success. These complaints were heard by William with the most phlegmatic indifference; he employed all his attention only on the balance of power, and the interests of Europe. He became unmindful of the cultivation of internal polity; and, as he forced alliances abroad, increased the influence of party at home. Patriotism began to be ridiculed as an ideal virtue; and the practice of bribing a majority in parliament became universal. The example of the great was caught by their inferiors in principle, and even decency, was gradually diminished; talents lay uncultivated, and the ignorant and profligate were received into favour. King William, upon accepting the crown, resolved to preserve as much of the prerogative as possible, and he sometimes exerted a branch of it, which his predecessors had never chosen to make use of, viz. the power of refusing his assent to some bill that had passed both houses. From this and other causes there were perpetual bickerings between him and his parliaments. At last William became fatigued with opposition. He admitted every restraint upon the prerogative in England, and the condition of being properly supplied with the means of humbling France. Provided the parliament supplied him with the means of executing this, he permitted them to rule the internal policy as they pleased. For the prosecution of the French war, the sums granted were indeed incredible. The parliament, not contented with furnishing such sums of money as they were capable of raising by the taxes of the year, mortgaged the taxes, and involved the nation in debts which has never since been able to discharge. The war with France continued during the greatest part of his reign; but at length the treaty of Ryswick, 1697, put an end to those contentions, in which England had engaged without policy, and came off at last without advantage. In the general pacification, her interests seemed entirely neglected, and for all the treasures she had sent to the continent, and all the blood which had been shed there, the only equivalent received was an acknowledgment of William's title from the king of France. The king, being now freed from a foreign war, set himself to strengthen his authority at home. As he could not bear the thoughts of being a king without military command, he wished to keep up in the time of peace, those forces which had been

ted during the time of danger. The commons, however, to his great mortification, passed a bill, that all the forces in the English pay, exceeding 7000 men, should be forthwith disbanded; and that those retained should be natural-born subjects of England. With this vote the king was exceedingly displeased. His indignation was kindled to such a degree, that he once formed a design of abandoning the government. From this, however, his ministers diverted him, and persuaded him to consent to the passing of the bill. These negotiations continued during the remainder of William's reign. He considered the commons as a body of men desirous of power for themselves, and consequently bent upon obstructing all his projects to secure the liberties of Europe. He seemed but little attached to any party in the house, all of whom he found more deserted or opposed him. He therefore resorted to whigs and tories indiscriminately, as instant or the immediate exigence demanded. He considered England as a place of labour, anxiety, and altercation. When he had any time for relaxation, he retired to Loo in Holland, where, among a few friends, he indulged in those festivities which he relished. Here he planned the difficult successions of the princes of Europe, and strove to undermine the schemes and the power of Lewis, his rival in politics and fame. But William could scarce live without being at variance with the French court. Peace had scarce been made with that nation, when he began to want resources for carrying on a new war, and assisting his English subjects in the confederacy against France. Several arts were used for inducing the people to second his aims; and the whole nation seemed at last to join in desiring a French alliance. He was in Holland concerting with his ministers operations for a new campaign. He had engaged in a negotiation with the prince of Hesse; assured him, that if he would besiege Cadix, the admiral of Castile and several other grandees of Spain would declare for the house of Austria. The elector of Hanover had resolved to incur in the same measures; the king of the Romans, and prince Lewis of Baden, undertook to invest Landau, while the emperor promised to send a powerful reinforcement into Italy: but he put a period to the projects and ambition of William III. He was naturally of a very feeble constitution; and it was by this time almost exhausted by a series of continual inquietude and exertion. He had endeavoured to repair his constitution, or at least to conceal its decays, by hunting and riding. On the 21st Feb. 1702, he went to Hampton Court from Kensington, his horse fell under him; and he was thrown with violence, that his collar bone was fractured. His attendants conveyed him to the palace at Hampton Court, where the fracture was reduced; and in the evening he returned to Kensington in his coach. The jolting of the carriage increased the fracture; and the bones were again reduced by Bidloo his physician. This in a robust constitution would have been a trifling misfortune; to him it proved fatal. For some time he appeared in a fair way of recovery; but falling asleep on his couch, he was seized with a shivering, and died.

which terminated in a fever and diarrhoea, that soon became dangerous and desperate. Perceiving his end approaching, the objects of his former care lay next his heart; and the fate of Europe seemed to remove the sensations he might feel for his own. The earl of Albemarle arriving from Holland, he conferred with him in private on the posture of affairs abroad. Two days after, having received the sacrament from Abp. Tennison, he expired on Sunday March 8th; having lived 52 years, and reigned 13.—He was in his person of a middle stature, a thin body, and a delicate constitution. He had an aquiline Roman nose, sparkling eyes, a large forehead, and a grave solemn aspect. He left behind him the character of a great politician, though he had never been popular; and of a formidable general, though he had seldom been victorious. Cunningham, his panegyrist, adds that of sincere pity. His deportment was grave, phlegmatic, and sullen; nor did he ever show any fire but in the day of battle. He was succeeded by the princess Anne, daughter of James II. and younger sister of his deceased queen, Mary II.

(71.) ENGLAND, HISTORY OF, UNTIL THE DEFEAT OF THE FRENCH AT BLENHEIM. Q. Anne ascended the throne in the 38th year of her age, to the general satisfaction of all parties. William had died at the eve of a war with France; and the new queen, who generally took the advice of her ministry on every important occasion, was now urged by opposite councils; a part of her ministry being inclined to war and another to peace. At the head of those who opposed a war with France was the earl of Rochester, lord Lieutenant of Ireland, first cousin to the queen, and the chief of the tory faction. At the head of the opposite party was the earl, afterwards duke, of Marlborough, since so much renowned for his victories over the French. That of Marlborough preponderated: the queen resolved to declare war; and communicating her intentions to the house of commons, by whom it was approved, war was proclaimed accordingly. In this declaration of war, Lewis was charged with having taken possession of a great part of the Spanish dominions; with designing to invade the liberties of Europe, to obstruct the freedom of navigation and commerce; and with having offered an unpardonable insult to the queen and her throne, by acknowledging the title of the pretender: he was accused of attempting to unite the crown of Spain to his own dominions, by placing his grandson upon the throne of that kingdom, and thus endeavouring to destroy the equality of power that subsisted among the states of Europe. This declaration of war on the part of England was seconded by similar declarations by the Dutch and Germans, all on the same day. Lewis XIV. whose power had been greatly circumscribed by William, expected on the death of the latter to enter on a field open for new conquests and fame. At the news of the English monarch's death, therefore, he could not suppress his rapture; the people of Paris, and indeed through the whole kingdom, testified their joy in the most public manner. At seeing, therefore, such a combination against him, the French monarch was filled with indignation;

indignation; but his resentment fell chiefly on the Dutch. He declared with great emotion, that as for those gentlemen pedlars the Dutch, they should one day repent their insolence and presumption, in declaring war against him whose power they had formerly felt and dreaded. By these threats, however, the affairs of the allies were no way influenced. Marlborough was appointed general of the British forces, and by the Dutch he was chosen generalissimo of the allied army; and indeed his after conduct showed, that no person could possibly have been chosen with greater propriety. He had learned the first rudiments of war under the famous marshal Turenne, having been a volunteer in his army; and by that general his future greatness was prognosticated. The first attempt that Marlborough made, to deviate from the general practice of the army, was to advance the subaltern officers, whose merits had been hitherto neglected. Regardless of seniority, wherever he found abilities, he was sure to promote the possessor; and thus he had all the upper ranks of commanders, rather remarkable for their skill and talents, than for their age and experience. In his first campaign, in the beginning of July 1702, he repaired to the camp at Nimègue, where he found himself at the head of 60,000 men, well provided with all necessaries, and long disciplined by the best officers of the age. He was opposed on the part of France by the duke of Burgundy, a youth of very little experience in the art of war; but the real acting general was the marshal Boufflers, an officer of courage and activity. But wherever Marlborough advanced, the French were obliged to retire before him, leaving all Spanish Guelderland at his discretion. The duke of Burgundy finding himself obliged to retreat before the allied army, rather than expose himself longer to such a mortifying indignity, returned to Versailles, leaving Boufflers to command alone. Boufflers retired to Brabant; and Marlborough ended the campaign by taking the city of Liege; in which he found an immense sum of money and a vast number of prisoners. This good fortune consoled the nation for some unsuccessful expeditions at sea. Sir John Munden had permitted a French squadron of 14 ships to escape him by taking shelter in the harbour of Corunna; for which he was dismissed the service by prince George. An attempt was made upon Cadiz by sea and land, Sir George Rooke commanding the navy, and the duke of Ormond the land forces; but this also miscarried. At Vigo, however, the British arms were attended with better success. The duke of Ormond landed with 2500 men six miles from the city, while the fleet forcing their way into the harbour, the French fleet that had taken refuge there were bunt by the enemy, to prevent their falling into the hands of the English. Eight ships were thus burnt and run ashore; and ten ships of war were taken, with 11 galleons, and above a million of money in silver. In the West Indies, admiral Benbow had been stationed with ten ships to distress the enemy's trade. Being informed that Du Cassé, the French admiral, was in those seas with a force equal to his own, he resolved to attack him; and soon after discovered the enemy's squadron near St Martha steering along the shore. He

quickly gave orders to his captains, formed the line of battle, and the engagement began. He found, however, that the rest of the fleet had taken some disgust at his conduct; and they permitted him to sustain, almost alone, the whole fire of the enemy. Nevertheless, the engagement continued till night, and he determined to renew next morning. But he had the mortification to perceive, that all the rest of his ships had fallen back, except one, which joined him in urging the pursuit of the enemy. Four days this intrepid seaman, assisted by only one ship, pursued and engaged the enemy, while his cowardly officers remained at a distance behind. His last day's battle was more furious than any of the former: alone, and unsupported by any of the rest, he engaged the whole French squadron; when his ship was shattered by a cannon ball, and he himself died soon after of his wounds. Two of his cowardly associates were shot on their arrival in England; one died on his passage thither; the others were disgraced. The next parliament, which was convened by the queen, were highly pleased with the success of the British arms on the continent. The house of commons was composed chiefly of Tories, who voted 40,000 seamen, and the same number of land forces, to act in conjunction with those of the allies. Soon after, the queen issued the parliament, that she was pressed by the allies to augment her forces; and upon this it was resolved that 10,000 more men should be added to the continental army, but on condition that the Dutch should immediately break off all commerce with France and Spain; a condition which was very readily complied with. In the beginning of April 1703, the duke of Marlborough crossed the sea, and, assembling the allied army, opened the campaign with the siege of Bonn, the residence of the elector of Cologne. This held out but short time. He next retook Huy; the garrison which, after a vigorous defence, surrendered prisoners of war. Limburgh was next besieged, and surrendered in two days; and thus the campaign concluded, the allies having secured the count of Liege and the electorate of Cologne from the designs of the enemy. In the campaign of 1704 the duke of Marlborough informed the Dutch that it was his intention to march to the relief of the empire, which had been for some time oppressed by the French forces; and the states gave him full powers to march as he thought proper, with assurances of their assistance in all his endeavours. The French king, finding Boufflers no longer capable of opposing Marlborough, appointed marshal de Villeroy in his place. But Marlborough, who, like Hannibal of old, was remarkable for despising the disposition of his antagonists, having great fears from Villeroy, immediately flew to the assistance of the emperor. Taking with him 23,000 British troops, he advanced by hasty marches to the banks of the Danube; defeated a body of French and Bavarians stationed at Donauwert to oppose him; then passed the river, and laid under contribution the dukedom of Bavaria which he sided with the enemy. Villeroy, who at first attempted to follow his motions, seemed all at once to have lost sight of the enemy; nor was he surprised of his route till informed of his success. But

t, in the mean time, marshal Tallard prepared another route to obtrude Marlborough's retreat with an army of 30,000 men. He was in after joined by the duke of Bavaria's force; so that the French army in that part of the continent amounted to 60,000 veterans, commanded by the two best generals then in France. To oppose these, the duke of Marlborough was joined by a body of 30,000 men, under the celebrated prince Eugene. The allied army, with this reinforcement amounted to about 52,000. After various marches and countermarches, the two armies met at Blenheim. A terrible engagement ensued, in which the French were entirely defeated, and a country of 100 leagues in extent fell into the hands of the conquerors. See **BLENHIM**.

3.) **ENGLAND, HISTORY OF, UNTIL THE DEATH OF THE FRENCH AT RAMILLIES.** Soon finishing the campaign of 1704, the duke of Marlborough repaired to Berlin, where he procured a reinforcement of 8000 Prussians, to serve prince Eugene in Italy. Thence he proceeded to negotiate for succours at the court of Vienna; and soon after returned to England, where he was received with every possible demonstration of joy. The arms of Britain, in the mean time, were no less fortunate by sea than by land. **GALLES** was taken by the prince of Hesse and George Rooke: but so little was the value of conquest then understood, that it was for some time in debate whether it was a capture worth thanking the admiral for; and at last it was considered as unworthy of public gratitude. Perhaps it has been since estimated as much above its value, as it was then doubtless estimated below it. At last it may, the British fleet, to the number of 13 ships of the line, soon after came up with the French, consisting of 52 men of war, commanded by the count of Thoulouse, off the coast of Algiers. This was the last great naval engagement in which the French ventured to face the British on equal terms. The battle began at 10 o'clock, and continued with great fury for 6 hours; the van of the French began to give way. The British admiral for two days attempted to force the engagement; but this was as cautiously declined by the French, who at last disappeared totally. Both sides claimed the victory, but the consequences decided it in favour of the British. In the mean time, the Spaniards, alarmed at the taking of Gibraltar, sent the marquis of Mazarin with a large army to retake it. France sent a fleet of 13 ships of the line: but part of it was dispersed by a tempest, and part taken by the British. Nor was the land army more successful. The siege continued for four months; and which time the prince of Hesse, who commanded the town for the English, gave many demonstrations of valour. At length, the Spaniards, having attempted to scale the rock in vain, and giving up hopes of taking the place, drew off their men and abandoned the enterprise. While the British were thus victorious by land and sea, a scene of contention was opened on the side of the continent. Philip V. grandson of Louis XIV. had been placed on the throne of that kingdom, and with the joyful concurrence of the great part of his subjects. He had also been nomi-

nated successor to the crown, by the late king of Spain's will. But in a former treaty among the powers of Europe, Charles, son of the emperor of Germany, was appointed heir to that crown; and this treaty had been guaranteed by France herself, though she now resolved to reverse that consent in favour of a descendant of the house of Bourbon. Charles was still farther led on to put in for the crown of Spain, by the invitation of the Catalonians, who declared in his favour; and with the assistance of the British and Portuguese, promised to arm in his cause. Upon his way to his newly assumed dominion, he landed in England; where he was received on shore by the dukes of Somerset and Marlborough, who conducted him to Windsor. He was kindly received by the queen; and furnished with 200 transports, 30 ships of war, and 9000 men, for the conquest of that extensive empire. The earl of Peterborough, a man of romantic bravery, offered to conduct them; and his single service was reckoned equivalent to an army. The first attempt of this general was on the city of Barcelona, at that time defended by a garrison of 5000 men. The fort Monjuic, situated on a hill that commanded the city, was attacked; the outworks were taken by storm, and the powder magazine was blown up by a shell; upon which the fort immediately surrendered, and the city capitulated in a short time after. The conquest of all Valencia succeeded the taking of Barcelona. Charles became master of Arragon, Cathagena, Grenada, and Madrid. The British general entered the capital in triumph, and there proclaimed Charles III. king of Spain without opposition. To these successes, however, very little regard was paid in Britain. The victories of the duke of Marlborough alone engrossed their attention. In 1706, he opened the campaign with an army of 80,000 men. He was met by the French under Villeroi near the village of Ramillies. An engagement ensued, in which the duke gained a victory almost as complete as that of Blenheim had been; and the whole country of Brabant was the reward of the victors. See **RAMILLIES**.

(74.) **ENGLAND, HISTORY OF, UNTIL THE CONCLUSION OF THE TREATY OF UNION WITH SCOTLAND.** The French troops were now dispersed; the city of Paris was in confusion; Lewis XIV. who had long been flattered with conquest, was now humbled to such a degree as almost to excite the compassion of his enemies. He intreated for peace, but in vain; the allies carried all before them; and his very capital began to dread the approach of the conquerors. But what neither his armies nor his politics could effect, was brought about by a party in England. The dissension between the whigs and tories saved France, that now seemed tottering on the brink of ruin. The councils of the queen had hitherto been governed by a whig ministry; for though the duke of Marlborough started in the interest of the opposite party, he soon joined the whigs, as he found them most sincere in the design of humbling France. The people, however, were now in fact beginning to change, and a general spirit of toryism to take place. The queen's personal virtues, her successes, her deference for the clergy, and their great veneration for her, began to have a

prevailing influence over the whole nation. People of every rank were not ashamed to defend the most servile tenets, when they tended to flatter the sovereign, or increase her power. They argued in favour of strict *hereditary succession, divine right, and non-resistance* to the monarch. The Tories, though they joined in vigorous measures against France, were never ardently their enemies: they rather secretly hated the Dutch, as of principles very opposite to their own; and longed for an opportunity of withdrawing from their friendship. They began to form plans of opposition to the duke of Marlborough. Him they considered as a self-interested man, who sacrificed the real advantages of the nation, in protracting a ruinous war, for his own private emolument and glory. They saw their country oppressed with an increasing load of taxes, which, by a continuance of the war, must inevitably become an intolerable burden. Their discontents began to spread, and the Tories wanted only a few determined leaders to assist them in removing the whig ministry. In the mean time, a succession of losses began to dissipate the conquering frenzy, that had seized the nation in general, and to incline them to wish for peace. The earl of Galway, who commanded the army in Spain, was utterly defeated at Almanza, by the duke of Berwick; (See ALMANZA;) and in consequence of this victory, all Spain, except the province of Catalonia, returned to their duty to Philip V. An attempt was made upon Toulon, by the duke of Savoy and prince Eugene by land, and an English fleet by sea; but to no purpose. The fleet under Sir Cloudesly Shovel, having set sail for England, was driven by a violent storm on the rocks of Scilly. His own ship was lost, and every person on board perished. Three more ships met with the same fate; while 3 or 4 others were saved with the utmost difficulty. In Germany, marshal Villars the general carried all before him, and was upon the point of restoring the elector of Bavaria. The only hopes of the people lay in the activity and conduct of the duke of Marlborough, who opened the campaign of 1707, about the middle of May; but even here they were disappointed. The duke declined an engagement; and after several marchings and countermarchings, both armies retired into winter quarters about the end of October. The French made vigorous preparations for the next campaign; and the duke returned to England, to meet with a reception, which he neither expected nor deserved. The most remarkable transaction, however, of this year, and indeed of this whole reign, was the union between the two kingdoms of Scotland and England. Though governed by one sovereign since the accession of James VI. to the throne of England, yet each nation continued to be ruled by its respective parliament; and often professed to pursue opposite interests to those of its neighbour. The union had often been unsuccessfully attempted before, and had indeed been the cause of bloody wars so long back as the time of Edward I. and III. (See § 27 & 29.) In all the former proposals on that head, both nations were supposed to remain free and independent; each kingdom having its own parliament, and subject only to such taxes and other commercial regula-

tions, as those parliaments should judge expedient for the benefit of their respective states. After the destruction of the Darien colony, king William had endeavoured to allay the national ferment, resuming the affair of an union, with as much fidelity as his warlike disposition would allow. The terms proposed were the same with those formerly held out, viz. a federal union, somewhat like that of the states of Holland. With this the Scots were prevailed on to send 20 commissioners to London; who, with 23 on the part of England, met at Whitehall in October 1706. As they were honoured with a visit from the queen to enliven their proceedings, and stimulate them to a more speedy dispatch of business: but the treaty was entirely broken off at this time, by Scottish commissioners insisting, that the rights and privileges of their countrymen trading to Africa and the Indies should be preserved and maintained. It was, however, resumed in 1706, when the commissioners again met on the 16th April in the council chamber of Whitehall. The Scottish commissioners still proposed a federal union, but the English were determined on an incorporation, which should not afterwards be dissolved into a Scottish parliament. Nothing but this, it was said, could settle a perfect and lasting friendship between the two nations. The commissioners of Scotland, however, still continued to resist an article, which subjected their country to the customs, excises, and regulations of trade as England; but the queen, being persuaded to pay visits in person to the commissioners, exerted herself so vigorously, that a majority was at last gained over; and all the rest yielded, though with reluctance, excepting Lockhart of Carnwath, who could by no means be persuaded either to sign or seal the treaty. The articles being fully prepared on the 22d of July, they were presented to the queen by the lord keeper, in name of the English commissioners; and a sealed copy of the instrument was likewise delivered by the lord chancellor of Scotland. They were most graciously received; and the same day the queen dictated an order of council, threatening with prohibition such as should be concerned in any dissent, libel, or in laying wagers with regard to the union. Notwithstanding all this harmony, however, the treaty was received with the utmost dissatisfaction in Scotland. The terms had been only concealed, so that nothing transpired, till the whole was at once laid before parliament. The ferment was then so general, that all ranks of people, however divided in other respects, united against this detested treaty. The nobility and gentry were exasperated at the annihilation of parliament, and the consequent loss of their influence and credit. The body of the people cried that the independence of the nation was sacrificed to treachery and corruption. They insisted on the obligations laid on their members to be long at London, in their attendance on the parliament, would drain the country of its industry, impoverish the members themselves, and subject them to the temptation of being corrupted. Nor was the commercial part of the people less satisfied. The dissolution of the trading company, the taxes laid on the necessities of life,

number of duties, customs, and restrictions, laid upon trade, were all matters of complaint. Before this time the trade of Scotland had been open to the Levant, the Baltic, France, Spain, Portugal, Holland, and the Dutch plantations; and it seemed difficult to conceive how the commerce of the country could be advanced, by laying restrictions upon it to these places, especially as no compensation allowed, viz. the privilege of trading to the English plantations in America, must have been a very trifling advantage, when the amount of the whole exports to these places did not near equal the expence of defending them. The most violent disputes took place in the parliament. Lord Belhaven made a most pathetic speech, enumerating the miseries that would attend this treaty; which drew tears from the audience, and to this day is reckoned prophetic by many of the Scottish nation. Almost every article of the treaty was the subject of a protest; addresses against it were presented to parliament by the convention of royal boroughs, the commissioners of the general assembly, the company trading to Africa and the Indies, as well as from shires, stewtries, boroughs, towns, and parishes, without distinction of whig, tory, presbyterian, or episcopal. Nor was the resentment of the people without doors less than that of the members within. A coalition was formed betwixt the presbyterians and cavaliers; and to such a height did the resentment of the people arrive, that they chose officers, formed themselves into regiments, provided horses and ammunition, burnt the articles of union, justified their conduct by a public declaration, and resolved to take the route to Edinburgh and dissolve the parliament. In the mean time, the privy council issued a proclamation against riots, commanding all persons to retire from the streets whenever the drum should beat; ordering the guards to fire on those who should disobey this command, and indemnifying them from all prosecution for naming or slaying the lieges. Even these precautions were insufficient. The duke of Queensberry, the chief promoter of the union, though guarded by double lines of horse and foot, was obliged to pass through the streets at full gallop, amidst the curses and imprecations of the people, who pelted his guards, and even wounded some of his friends who attended him in the coach. In opposition to all this fury, the duke of Queensberry and others attached to the union magnified the advantages that would accrue to the kingdom from the union; they took off the resentment of the clergy, by promoting an act to be inserted in the treaty, by which the presbyterian discipline was to be the only government of the church of Scotland, unalterable in all succeeding times, and a fundamental article of the union. emissaries were employed to disunite the Cameronians from the Cavaliers, by demonstrating the absurdity, finicalness, and danger, of such a proceeding. The India company was flattered with the prospect of being indemnified for the losses they had sustained, and individuals by sharing an equivalent. Their last manoeuvre was to bring over a party in the Scots parliament, nicknamed the *Synodrous Parliament*, from their fluctuating between ministry and opposition, without attaching themselves to

any party till the critical moment, which was either to cement both kingdoms by a firm union, or involve them in the calamities of war. By this unexpected stroke the ministry obtained a decisive victory, and all opposition was rendered vain. The articles of treaty were ratified by parliament, with some trifling variations, on the 25th March, 1707; when the duke of Queensberry finally dissolved that ancient assembly, and Scotland ceased to be a separate independent kingdom. On the conclusion of the treaty, the queen informed both houses of the English parliament, that the treaty of union, with some additions and alterations, was ratified by an act of the parliament of Scotland: that she had ordered it to be laid before them, and hoped it would meet their approbation. She observed, that they had now an opportunity of putting the last hand to a happy union of the two kingdoms: and that she should look upon it as a particular happiness, if this great work, so often attempted before without success, could be brought to perfection in her reign. Objections, however, were started by the tory party; but they were at that time too weak to be heard with any attention. Sir John Parkington compared the new treaty to the marriage of a woman without her consent. It was an union carried on by corruption and bribery within doors, and by force and violence without. The promoters of it had basely betrayed their trust, by giving up their independent constitution: and he would leave it to the judgment of the house, whether or not men of such principles were fit to be admitted into their house of representatives. Lord Haversham, in the upper house, said, the question was, Whether two nations, independent in their sovereignties, that had their distinct laws and interests, different forms of worship, church government and order, should be united into one kingdom? He supposed it an union made up of so many incongruous ingredients, that should it ever take effect, it would require a standing power and force to keep them from falling asunder, and breaking in pieces every moment. Above 100 Scottish peers, and as many commoners, he said, were excluded from sitting and voting in parliament, though they had as much right to sit there as any English peer had, to sit and vote in the parliament of England. The union, he said, was contrary to the sense of the Scottish nation; the murmurs of the people had been so loud as to fill the whole kingdom, and had reached even the doors of parliament. That the government had issued a proclamation, pardoning all slaughter, bloodshed, and maiming, committed upon those who should be found in tumults; and from all these circumstances he concluded, that the people of Scotland were averse to an incorporating union, which, he supposed, would be a most dangerous expedient to both nations. All these arguments, however, were answered by those of the opposite party with such success, that the union was unalterably completed on the first of May, 1707; and the island took the name of "The United Kingdom of GREAT BRITAIN." The queen expressed the highest satisfaction when it received the royal assent, and said, "She did not doubt but it would be remembered and spoke of hereafter, to the honour

your of those who had been instrumental in bringing it to such a happy conclusion. She desired that her subjects of both Kingdoms should from henceforward behave with all possible respect and kindness towards one another; that so it might appear to all the world they had hearts disposed to become **ONE PEOPLE**." The first of May was appointed a day of public thanksgiving; and congratulatory addresses were sent up from all parts of England, excepting the university of Oxford. The Scots, however, were totally silent on the occasion.

(75.) **ENGLAND, HISTORY OF, UNTIL THE DEFINITIVE TREATY OF PEACE, AT UTRECHT.** In the treaty of union, the English commissioners were not only able statesmen, but, for the most part, well skilled in trade, which gave them an evident advantage over those of Scotland, who consisted of lords and gentlemen who had no commercial knowledge. Hence they were overmatched by the former, in the great objects which were to give the turn to national prosperity; though they were very careful to preserve all their heritable offices, superiorities, jurisdictions, and other privileges and trappings of the feudal aristocracy. Had the English commissioners made a liberal use of the advantages afforded them at this time, it would have been in their power greatly to have enriched themselves, as well as the inhabitants of Scotland; "but instead of this, (says Mr Knox,) in negotiating with a ruined kingdom, they were influenced by the then narrow, short-sighted principle of commercial monopoly; and the consequences were such as might, with a small degree of reflection, have been foreseen. Instead of a solid compact, affording, upon the whole, reciprocal advantages, and which it would have been the inclination as well as interest of both nations to preserve inviolate, the concessions on the part of Scotland, and the restrictions on their trade, were so quickly and severely felt, that about the 6th year after the ratification of the treaty, the 16 peers who first represented Scotland in the upper house, though most of them had been the supporters of administration in promoting the union, unanimously moved for its dissolution. The motion was followed by a violent debate, in which, however, the Scottish peers were at last over-ruled, and thenceforth the nation submitted reluctantly to its fate. The metropolis, having no manufactures, now beheld itself deprived of its only support, by the translation of the parliament to London. The trading towns pined under the duties and restrictions on their commerce; the whole kingdom, after so many fatal disasters, seemed completely ruined beyond recovery, and all degrees of men sunk under the weight of these complicated misfortunes. The first fruits of the treaty in Scotland was a board of customs and another of excise, the appointment of commissioners, collectors, &c. with other necessary officers, who were immediately distributed over the several sea-ports and districts of the nation. In many parts they were roughly used, particularly the excise officers; and in the Orkneys, these officers were so frightened by the country people, that for some time the business was obliged to be postponed." In 1708, there was a warm debate in the grand committee of the house

of lords, occasioned by a bill passed by the commons, for rendering the union of the two kingdoms more entire and complete, whereby it was enacted, that, "from the 1st of May, 1708, there should be but one privy council in the kingdom of Britain."—Of this affair Mr Cunningham gives a particular account, and informs us, that he himself had a hand in it, and that he had "from his youth born a just hate to the privy council of Scotland." The arguments for the dissolution were its enormous stretches of power and acts of cruelty; that it could now be of no other use in Scotland, than that the court might thereby govern every thing at pleasure, and procure such members of parliament as they thought proper; against which both Scots and English ought now carefully to guard themselves. On the other hand, it was argued, that the abuse of the power complained of was no argument for the entire dissolution of the council, though it was for a restriction and limitation of it; that it was necessary that a privy council should remain in Scotland, out of regard to the ancient customs of the country, and to restrain the rage of the people, which was then ready to break out beyond all bounds. The dissolution, however, was carried by 50 against 40; after which the nation being deprived of this last fragment of their ancient government, the opposers of the union raised the animosities of the people to a dangerous height; but the ferment abated, after an ineffectual attempt in favour of the pretender.—We now return to the duke of Marlborough, who had gone over to Flanders, where he resolved to push his good fortune. Peace had been offered more than once; treaties entered upon, and as often frustrated. After the battle of Ramillies, the king of France had employed the elector of Bavaria to write letters in his name to the duke of Marlborough, containing proposals for opening a congress. He offered to give up either Spain and its dominions, or the kingdoms of Naples and Sicily, to Charles of Austria, and to give a barrier to the Dutch in the Netherlands. But these terms were rejected. The two armies once more met in numbers nearly equal, at Oudenarde. (See **OUDEWARDE**.) In this engagement the electoral prince of Hanover, afterwards George II. of Britain, greatly distinguished himself, and gained the whole glory of the first attack. In the engagement his horse was killed under him, and colonel Luschki close by his side. "On that day (says Cunningham) this excellent young prince, discovered such courage as no man living ought to forget, and all posterity will never surpass." An engagement ensued, in which the French were defeated, and Lille, Ghent, Bruges, and all the other towns in Flanders soon after fell into the hands of the victors. The campaign ended with fixing a barrier to the Dutch Provinces, and it now only remained to force a way into the provinces of the enemy. The French king being now in a manner reduced to despair, again sued for peace: but the demands of the allies were so high, that he was obliged to prepare for another campaign, in 1709. The first attempt of the allies was on the city of Tourday, garrisoned by 12,000 men, and exceedingly strong both by nature and art. After a terrible siege of 23 days,

the town capitulated; and a month afterwards the citadel, which was still stronger than the town, next followed the bloody battle of Malplaquet; here the allied army, consisting of 110,000 men, attacked the French consisting of 120,000, strongly posted and fortified in such a manner that they were quite inaccessible. (See MALPLAQUET.) Nothing, however, was able to stand before the allied army; they drove the French from their fortifications; but their victory cost them dear; 6000 of their best troops lay dead on the field of battle. Cunningham, however, differs prodigiously from this account; his computation being only 6000 killed, and 9000 wounded on the part of the allies, and 7000 killed, and 10,000 wounded on that of the French. The consequence of this victory was the surrender of the city of Mons, which ended the campaign. The last campaign of the duke of Marlborough, which happened in 1713, is said to have excelled all his former exploits. He was opposed by marshal Villars, who had commanded the French in the battle of Malplaquet. He contrived his measures so, by marching and countermarching, he induced the enemy to quit a strong line of entrenchments, without striking a blow, which he afterwards took possession of. This enterprise was effected by the taking of Bouchain, which was the last military achievement of this great general. Continuanance of conduct and success almost unaltered, he had gained to the allies a prodigious extent of country. From the beginning of war, which had now continued 9 years, he perpetually advanced, and never retreated before his enemies, nor lost an advantage he had gained over them. He most frequently gained the enemy's posts without fighting; but where he was obliged to attack, no fortifications were able to resist him. He had never besieged a city which he did not take, nor engaged in a battle in which he did not come off victorious. Thus the duke had reduced under their command Spanish Flanders, Limbourg, Brabant, Flanders, and the rest; they were masters of the Scarpe, the river of Bouchain had opened for them a route to the heart of France, and another campaign might have made them masters of Paris: on the duke's return from this campaign, he was accused of having taken a bribe of 6000*l.* from a Jew, who had contracted to supply the army with bread; and the queen thought proper to dismiss him from all his employments. The removal of this great general, the command of the British forces was given to the duke of Monmouth. The transactions which followed, as presented by Mr Cunningham, are by no means favourable to the character of the British king. He represents the people at large as blind and headstrong and furious clergy, who with-revive the absurdities of the Romish religion, to unite the English and Gallican churches; the general of the army acting a most insidious part by giving the enemy intelligence of the designs of the allies, before he declared that he was acting in concert with them; and the queen as commanding him to act such a shameful part, nay as acting in a similar manner herself. Eugene complained much of the inactivity

of the English general, though he seemed to be unacquainted with his treachery; while the whole army loaded him with execrations, calling him "a stupid tool, and a general of straw." All this, however, was in vain; the duke continued to prefer the queen's commands to every other consideration. The disgrace of the duke of Marlborough had been owing to the prevalence of the tory party, who had now got the whig ministry turned out; the consequence was, that in spite of all the remonstrances, memorials, &c. of the allies, the British army in Flanders was ordered not to act offensively. Hence the operations languished, a considerable body of the allies was cut off at Denain, and the French retook some towns. A peace was at last concluded in 1713, between France and Britain. In this treaty it was stipulated, that Philip V, now acknowledged king of Spain, should renounce all right to the crown of France, the union of two such powerful kingdoms being thought dangerous to the liberties of Europe; that the duke of Berry, Philip's brother, and after him in succession, should also renounce his right to the crown of Spain, in case he became king of France; and that the duke of Savoy should possess the island of Sicily with the title of king; together with Fenestrelles, and other places on the continent; which increase of dominion was in some measure made out of the spoils of the French monarchy. The Dutch had the barrier granted them which they so much desired; and if the crown of France was deprived of some dominions to enrich the duke of Savoy, on the other hand the house of Austria was taxed to supply the wants of the Hollanders, who were put in possession of the strongest towns of Flanders. The fortifications of Dunkirk were demolished. Spain gave up Gibraltar and the island of Minorca. France resigned her pretensions to Hudson's bay, Nova Scotia, and Newfoundland; but was left in possession of Cape-Breton, and the liberty of drying fish upon the shore. Among the articles glorious to the British nation, their settling free the French Protestants confined in the prisons and galleys for their religion, was not the least meritorious. For the emperor it was stipulated, that he should possess the kingdom of Naples, the duchy of Milan, and the Spanish Netherlands. The king of Prussia was to have Upper Guelder; and a time was fixed for the emperor's acceding to these articles, as he had for some time obstinately refused to assist at the negotiation. This famous treaty was signed at Utrecht on the last day of March, 1713.

(76.) ENGLAND, HISTORY OF, UNTIL THE END OF Q. ANNE'S REIGN, AND THE ACCESSION OF K. GEORGE I. The year 1713 was also remarkable for an attempt of the Scottish peers and commons to dissolve the union. During the debates on this subject, the earl of Peterborough endeavoured to prove the impossibility of dissolving the treaty, which he compared to a marriage, that, being once contracted, could not be dissolved by any power on earth. He observed, that though England, who in the national marriage, must be supposed to represent the husband, had in some instances been unkind to the lady, she ought not presently to sue for a divorce; and added,

when the union was termed a mere political expedient, that it could not have been made more solemn, unless, like the ten commandments, it had come from heaven. The duke of Argyle also, who had originally promoted the union, now declared against it, and said, that unless it were dissolved, he did not long expect to have either property left in Scotland, or liberty in England. By some other peers it was alleged, that the union had not produced its intended effect; that it had been designed to promote friendship between the two nations; but so far from answering the purpose, the animosities between them were never so great as then; and if they were separated again, they would be better friends. This motion was over-ruled in the house; but the discontent of the people still continued, and addresses were prepared throughout the kingdom, and matters were in danger of coming to the worst extremities, when the attempt of the pretender, in 1715, so divided the minds of the people, that no unanimous effort could ever afterwards be made; though the union was long generally considered, and still is by many individuals, as a national grievance. The history of the latter part of this reign consists entirely of the intrigues of the whigs and tories against each other; and the last of these continued to prevail. Whether the ministry at this time wished to alter the succession from the Hanoverian line, cannot now be clearly made out; but certain it is, that the whigs firmly believed it, and the tories but faintly denied the charge. The suspicions of the former became every day stronger, particularly when they saw a total removal of the whigs from all places of trust and confidence throughout the kingdom, and their employments bestowed on professed tories, maintainers of an unbroken hereditary succession. The violent dissensions between these two parties, their unbounded licentiousness, cabals, and tumults, made the queen's situation very disagreeable; her health declined; and on the 28th July 1714, she fell into a lethargic insensibility. The distemper gained ground so fast, that next day the physicians despaired of her life. All the members of the privy council without distinction, were now summoned from the different parts of the kingdom; and they began to provide for the security of the constitution. A letter was sent to the elector of Hanover, informing him of the queen's desperate situation, and desiring him to repair to Holland, where he would be attended by a British squadron to convey him to England. At the same time they dispatched instructions to the earl of Stafford at the Hague, to desire the States General to be ready to perform the guaranty of the Protestant succession. Precautions were taken to secure the sea ports; and the command of the fleet was bestowed upon the earl of Berkely, a professed whig. These measures, which were all dictated by that party, answered a double end. They urged the alacrity of the whigs in the cause of their new sovereign, and implied that the state was in danger from the disaffection of the opposite party. On the 30th of July, the queen seemed to be somewhat relieved by the medicines which had been given her. She rose from her bed about 8 A. M. and walked a little. After some time, casting

her eyes on a clock that stood in her chamber, she continued to gaze at it for some minutes. One of the ladies in waiting asked her, what she saw there more than usual? to whom the queen only answered by turning her eyes upon her with a dying look. She was soon after seized with an apoplectic fit; from which, however, she was somewhat recovered by the assistance of Dr Mead. She continued all night in a state of stupefaction. She gave some signs of life between 12 and 1 o'clock; but expired the following morning, a little after 7 o'clock, in the 50th year of her age, and 13th of her reign. This princess was remarkable neither for learning nor capacity. She seemed rather fitted for the duties of private life than public station: being a pattern of conjugal fidelity, a good mother, a warm friend, and an indulgent mistress; and to her honour it must be recorded, that during her reign none suffered in high treason. In her ended the line of the Stuarts, a family equally remarkable for their misfortune and misconduct. The queen had no sooner signed her breath than the privy council met, and three instruments were produced, by which the elector of Hanover appointed several of his known adherents to be added as lords justices to the great officers of the kingdom. Orders were immediately issued out for proclaiming George king of England, Scotland, and Ireland. The regency appointed the earl of Dorset to carry to the intimation of his accession to the crown, and to attend him in his journey to England. They sent the general officers, in whom they could confide, to their posts; they reinforced the garrisons of Portsmouth, and appointed the celebrated Addison secretary of state. No tumult, no commotion, rose against the accession of the new king; and this gives a strong proof, that the tories, had they really intended to exclude him, never took any rational measures to accomplish the purpose.

(77.) ENGLAND, HISTORY OF, UNTIL THE END OF THE REBELLION IN 1715, AND THE ESTABLISHMENT OF SEPTENNIAL PARLIAMENTS. King George first landed at Greenwich, where he was received by the duke of Northumberland, captain of the life guards, and the lords of the regency. From the landing place he walked to his house in the park, accompanied by a great number of the nobility and other persons of distinction who had made great opposition to the ruling party in the last. George I. was 54 years old when he ascended the British throne. His mature age, his sagacity and experience, his numerous alliances, and the general tranquillity of Europe, contributed to establish his interests, and promote him a peaceable and happy reign. His virtues though not shining, were solid; and he was of very different disposition from the monarchs of the Stuart family. These were known to a proverb for leaving their friends in extremity; George on the contrary, soon after his arrival in England was heard to say, "My maxim is, never to abandon my friends, to do justice to all the world and to fear no man." To these qualities of affection and perseverance, he joined great application to business. One fault, however, with regard to England, remained behind: he studied the inter-

of the people he had left, more than of those who came to govern. The new king soon discovered his inclination to support the whigs, who had led him to the throne. When he retired to his chamber, after his first landing, he sent for some of the nobility as had distinguished themselves by their zeal for his succession. He expressed the greatest regard for the duke of Marlborough, just then arrived from the continent, which he had been driven by the violence of the tories.

The same friendship he professed for the old leaders of the whigs; but the tories found themselves excluded from the royal favour. The king did not seem sensible that the monarch of a constitutional monarchy was to be a monarch of a few rules but one half of his subjects. It was his misfortune, and consequently that of the nation, that he was hemmed round by men who opposed him with all their own interests and prejudices. The whigs, while they pretended to support the crown for the king, were using all their power to confirm their own interests, extend their influence, and give laws to their sovereign. Instantaneous change was made in all the offices of trust, honour or advantage. The names of the contending parties were changed into those of *Hanoverians* and *Jacobites*. The former governed the senate and court, oppressed whom they would, bound the lower orders of people by their laws, and kept them at a distance by violent measures; and then taught them to call this liberty. In consequence of these partialities, the most violent contentions were raised through the whole kingdom. The tories or Jacobites raised the most seditious outcries; and had the pretender been a man of any judgement or abilities, a fair opportunity was now offered him of striking a decisive blow. Instead of this, he continued a calm spectator on the continent, and only sent over his emissaries to disperse ineffectual manifestoes and declare the unwary. In these papers he observed, that the late queen had intentions of calling him to the throne. He expostulated with his people upon the injustice they had done themselves in promising a foreign prince for their sovereign, contrary to the laws of the country, that gave him no real claim. Copies of a printed address were sent to the dukes of Shrewsbury, Marlborough, Argyle, and other noblemen of the first rank; vindicating his right to the crown, and complaining of the injustice of his people. Though he still complained of their conduct, he never took any step to correct his own, or remove that obstacle by which his father had lost the throne. He still continued to profess the same regard to the Catholic religion; and instead of concealing his sentiments on that head, gloried in his principles. But however greatly the Popish religion was at that time hated in England, the principles of the dissenters were not much more agreeable to the generality. The tories affirmed, that under a whig administration heresy and immorality were daily gaining ground. The lower orders of the clergy joined in these complaints, and printed out several tracts published in favour of Unitarianism and Socinianism. The ministry not only refused to punish the delinquents, but silently supported the clergy themselves, and forbade their future exertions on these topics.—The parliament was

now dissolved, and another called by a very extraordinary proclamation. In this the king complained of the evil designs of men disaffected to his succession; and of their having misrepresented his conduct and principles. He expressed his hopes, that his subjects would send up to parliament the fittest persons to redress the present disorders. He intreated that they would elect such in particular, as had expressed a firm attachment to the protestant succession, when it was in danger. In the election of this important parliament, uncommon vigour was exerted on both sides; but by dint of the moneyed interest that prevailed in corporations, and the activity of the ministry, a great majority of whigs was returned both in England and Scotland. Upon the first meeting of this new parliament, the most rigorous measures were resolved upon against the late ministry. A committee was appointed to inspect all the papers relative to the late treaty, and to pick out such as might afford grounds of accusation against the late ministry. The earl of Oxford was impeached of high treason, and sent to the Tower. The violence of the house of commons was answered with equal violence without doors. Tumults became every day more frequent, and every tumult served only to increase the severity of the legislature. They now passed an act, declaring, that if any persons to the number of 12, unlawfully assembled, should continue together one hour after being required to disperse by a justice of peace or other officer, and after hearing the act against riots read in public, they should be deemed guilty of felony without benefit of clergy. This is a very severe act, and a great restriction on the liberty of the subject, as by it all meetings of the people, either for the purposes of amusement or redress, are rendered criminal, if it shall please any magistrate to consider them as such. These proceedings excited the indignation of the people, who perceived that the avenues of royal favour were closed to all but a faction. A rebellion commenced in Scotland, where to their other grievances they joined that of the union, which they were taught to consider as an oppression. The Scots malecontents had all along maintained a correspondence with their friends in England, who were now driven by resentment and apprehension, into a system of politics they would not otherwise have dreamed of. Some of the tory party, who were men attached to the Protestant religion, and of moderate principles in government, began to associate with the Jacobites, and to wish in earnest for a revolution. Scotland first showed them the example. The earl of Mar, assembling 300 of his vassals in the Highlands, proclaimed James III. at Castleton; and setting up his standard at Braemar, assumed the title of *lieutenant general of his majesty's forces*. To second these attempts, two vessels arrived from France, with arms, ammunition, and officers, together with assurances to the earl, that the pretender himself would shortly come over to head his own forces. In consequence of this promise, the earl soon found himself at the head of 10,000 men, well armed and provided. He secured the pass of Tay at Perth, where his head quarters were established; and made himself master of the whole province of Fife.

and all the sea-coast on that side of the frith of Forth. He marched from thence to Dumbblain, as if he had intended to cross the Forth at Stirling bridge; but there he was informed, that the duke of Argyle, who on this occasion was appointed commander in chief of all the forces in North Britain, was advancing against him from Stirling with all his own clans, assisted by some troops from Ireland. Upon this he retreated, but being soon after joined by some of the clans under the earl of Seaforth, and general Gordon, an experienced officer, who had signalized himself in the Russian service, he resolved to face the enemy, and directed his march towards the south. The duke of Argyle, apprised of his intentions, and willing to prove his attachment to government, resolved to give him battle near DUMBLAIN, though his forces did not amount to half the number of the enemy. In the morning, therefore, he drew up his army, which did not exceed 3500 men, in order of battle; but he soon found himself greatly outflanked by the insurgents. The duke, therefore, perceiving the earl make attempts to surround him, was obliged to alter his disposition, which, on account of the scarcity of general officers, was not done so expeditiously as to be finished before the rebels began the attack. The left wing of the duke's army received the centre of the enemy, and supported the first charge without shrinking. It seemed even for a while victorious, and the earl of Clanronald was killed. But Glengary, who was second in command, undertook to inspire his intimidated forces with courage; and waving his bonnet, cried out several times *Revenge!* This animated the rebel troops to such a degree, that they followed him close to the points of the enemy's bayonets, and got within their guard. A total rout began to ensue of that wing of the royal army; and general Wetham, their commander, flying full speed to Stirling, gave out that the rebels were completely victorious. In the mean time, the duke of Argyle, who commanded in person on the right, attacked the left of the enemy; and drove them before him two miles, though they often faced about, and attempted to rally. Having thus entirely broken that wing, and driven them over the river Allan, he returned back to the field of battle; where, to his great mortification, he found the enemy victorious, and patiently waiting for the assault. However, instead of renewing the engagement, both armies continued to gaze at each other, neither caring to begin the attack. In the evening both parties drew off, and both claimed the victory. All the advantages of a victory, however, belonged to Argyle. He had interrupted the progress of the enemy; and in their circumstances delay was defeat. In fact, the earl of Mar soon found his losses and disappointments increase. The castle of Inverness was delivered up by lord Lovat, who had hitherto professed to act in the interest of the pretender. The marquis of Tullibardine forsook the earl, in order to defend his own part of the country; and many of the clans seeing no likelihood of coming to a second engagement, returned quietly home. In the mean time, the rebellion was still more unsuccessfully prosecuted in England. From the time that James had undertaken

this wild project in Paris, in which the duke of Ormond and lord Bolingbroke were engaged, lord Stair, the English ambassador there, had penetrated all his designs, and sent faithful accounts of all his measures and of all his adherents to the ministry at home. Upon the first rumour, therefore, of an insurrection, they imprisoned the lords and gentlemen of whom they had suspected. But these precautions were not able to stop the insurrection in the western counties, where it was already begun. All their preparations, however, were weak and ill conducted; every measure was betrayed to government as soon as projected, and many revolts were repressed in the very outset. The university of Oxford was treated with great severity on this occasion. Major general Pepper with a strong detachment of dragoons, took possession of the city at day-break, declaring that he would instantly shoot any of the students who should presume to appear without the limits of their respective colleges. The insurrection in the northern counties came to greater maturity. In October 1715, the earl of Derwentwater and Forster took the field with a body of horse, being joined by some gentlemen from the border of Scotland, proclaimed James III., Their attempt was to seize upon Newcastle, in which they had many friends; but finding the gates closed, they retired to Hexham. To oppose them, general Carpenter was detached by government with a body of 900 men, and an engagement was immediately expected. The rebels had two methods which they might have conducted themselves with prudence and safety. The one was to march directly into the western parts of Scotland, and there join general Gordon, who commanded a strong body of Highlanders. The other was to cross the Tweed, and boldly attack general Carpenter, whose forces did not exceed their own. From the insatiable attendant on the march of that party, neither of these counsels were pursued. They took the rout to Jedburgh, where they hoped to leave Carpenter on one side, and penetrate into England by the western border. This was the effectual means to cut them off either from retreat or assistance. A party of Highlanders, who had joined them by this time, at first refused to accompany them in such a desperate incursion, and one half of them actually turned to their own country. At Brampton, Forster opened his commission of general, which had been sent him by the earl of Mar, and the proclaimed James III. They continued their march to Penrith, where the body of the rebels that was assembled to oppose them fled at their appearance. From Penrith they proceeded by the way of Kendal and Lancaster to Preston, which they took possession without resistance. But this was the last stage of their ill-advised incursion; for general Wills, at the head of 700 men, came up to attack them; and from his activity there was no escaping. They now, therefore, began to raise barricades about the town, and to put the place in a posture of defence, repulsing the first attacks of the royal army with success. Next day, however, Wills was reinforced by Carpenter, and the town was invested on all sides. In this deplorable situation, to which

were reduced by their own rashness, Forster did to capitulate with the general; and accordingly sent colonel Oxburgh, who had been taken prisoner, with a trumpeter to propose a capitulation.

This, however, Wills refused; alleging he would not treat with rebels, and that the favour they had to expect was to be spared immediate slaughter. These were hard terms, no better could be obtained. They accordingly laid down their arms, and were put under long guard. All the noblemen and leaders were secured, and a few of their officers tried for acting from the royal army, and shot by order of the court-martial. The soldiers were imprisoned at Carlisle and Liverpool; the noblemen and considerable officers were sent to London, and led through the streets pinioned and bound together, to intimidate their party. Though the schemes of a pretender appear to have been foolishly executed in Britain, yet they were much more so in France. Bolingbroke had been made secretary at Paris, and Ormond his prime minister. But these statesmen quickly found that nothing could be done in favour of his cause. Louis XIV. who had always espoused the interest of the excluded family, was just dead; and the Duke of Orleans, who succeeded in the government of the kingdom, was averse to lending the king any assistance. His party, however, which was composed of the lowest and the most ignorant exiles from the British dominions, affected the utmost confidence, and boasted of a certainty of success. The deepest secrets of his cause, and all his intended measures, were bantered about in coffee-houses by persons of the lowest rank both in fortune and abilities. Subaltern officers resolved to be his generals; and even professors were entrusted to manage his negotiations. He therefore could be expected from such assistance and such councils. Though by this time he might easily have seen that his affairs were desperate; yet, with his usual insatiation, he refused to hazard his person among his friends in London, and, at a time when such a measure was too desperate for success. Passing, therefore, through France disguised, and embarking in a small vessel at Dunkirk, he arrived, after a voyage of a few days, on the coasts of Scotland, with only six gentlemen for attendants. He passed unknown through Aberdeen to Fetteresso, where he was met by the earl of Mar, and about 30 noblemen and gentlemen of the first quality. There he was solemnly proclaimed; and his declaration, dated at Commerce, printed and dispersed. He went from thence to Aberdeen, where he made a public entry; and 30 days more he arrived at Scoon, where he intended to have the ceremony of his coronation performed. He ordered thanksgivings to be made on the day of his arrival; enjoined the ministers to pray for him in their churches; and without the small parade of power, went through the ceremonies of royalty, which drew an air of ridicule on all his conduct. Having thus spent some time in unimportant parade, he resolved to abandon the enterprise with the same levity with which it was undertaken. Having made a speech to his grand council, he informed them of his want of money,

arms, and ammunition, for undertaking a campaign, and therefore deplored that he was obliged to leave them. He once more embarked on board a small French ship, that lay in the harbour of Montrose, accompanied with several lords, his adherents; and in five days arrived at Graveline. General Gordon, who was left commander in chief of the forces, with the assistance of earl Mareschal, proceeded at their head to Aberdeen, where he secured three vessels to sail northward, which took on board such persons as intended to make their escape to the continent. He then continued his march through the Highlands, and quietly dismissed his forces as he went forward. This retreat was made with such expedition, that the duke of Argyle, with all his activity, could never overtake his rear, which consisted of 1000 horse. The rebellion being ended, the law was put in force with all its terrors; and the prisoners of London were crowded with those deluded persons, whom the ministry seemed resolved not to pardon. The commons, in their address to the crown, declared they would prosecute in the most rigorous manner the authors of the late rebellion; and their measures were as vindictive as their resolutions were speedy. The earls of Derwentwater, Nithsdale, Carnwath, and Wintown, the lords Widdrington, Kenmuir, and Nairne, were impeached; and upon pleading guilty, all but lord Wintown received sentence of death. No intreaties could prevail upon the ministry to spare these unhappy men. The house of lords even presented an address to the throne for mercy, but without effect; the king only answered, that on this, as on all other occasions, he would act as he thought most consistent with the dignity of the crown and the safety of the people. Orders were accordingly dispatched for executing the lords Derwentwater, Nithsdale, and Kenmuir, immediately; the rest were respited to a farther time. Nithsdale, however, had the good fortune to escape in woman's clothes, that were brought him by his mother the night before his intended execution. Derwentwater and Kenmuir were brought to the scaffold on Tower-hill at the time appointed. Both underwent their sentence with calm intrepidity, and seemingly less moved than those who beheld them. An act of parliament was next made for trying the private prisoners in London, and not in Lancashire where they were taken in arms. This was considered by some of the best lawyers as an alteration of the ancient constitution of the kingdom, by which it was supposed, that every prisoner should be tried in the place where the offence was committed, as a jury of neighbours would be best qualified to enter into the nature of their offence. In the beginning of April, commissioners for trying the rebels met in the court of common pleas, when bills were found against Mr Forster, Mr Macintosh, and 20 of their confederates. Forster escaped from Newgate, and reached the continent in safety; the rest pleaded not guilty. Pitts, the keeper of Newgate, being suspected of having connived at Forster's escape, was tried for his life but acquitted. After this, Macintosh, and several other prisoners, broke from Newgate, having mas-

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tered the keeper and turnkey, and disarmed the sentinel. The court proceeded to the trial of those that remained; 4 or 5 were hanged, drawn, and quartered at Tyburn. The judges appointed to try the rebels at Liverpool found a considerable number of them guilty of high treason: 22 were executed at Manchester and Preston, and about 1000 were transported to North America. The rebellion being thus extinguished, the danger of the state was made a pretence for continuing the parliament beyond the term fixed for its dissolution. An act, therefore, was made by their own authority, repealing that by which they were to be dissolved every third year, and the term of their duration was extended to 7 years. This attempt in any delegated body of people, to increase their own power by extending it, is contrary to the first principles of justice. If it was right to extend their duration to 7 years, they might also perpetuate their authority for ever; and thus cut off even the shadow of a nomination. This bill, however, passed both houses, and all objections to it were considered as disaffection. The people might murmur at this encroachment, but it was too late for redress.

(78.) ENGLAND, HISTORY OF, UNTIL THE END OF THE REIGN OF K. GEORGE I. AND ACCESSION OF K. GEORGE II. Domestic concerns being thus adjusted, the king resolved upon a voyage to the continent. He foresaw a storm gathering from Sweden. Charles XII. was highly provoked against him for having entered into a confederacy with the Russians and Danes during his absence at Bender, and for having purchased from the king of Denmark the towns of Bremen and Verden, which constituted a part of his dominions. In consequence of this, Charles maintained a close correspondence with the dissatisfied subjects of Great Britain; and a scheme was formed for landing a considerable body of Swedish forces, with the king at their head, in some part of the island, where it was expected they would be joined by the malecontents in the kingdom. Count Gyllenburgh, the Swedish minister in London, was peculiarly active in the conspiracy; but being seized with all his papers by order of the king, the confederacy was broke for that time. A bill, however, was passed by the commons, forbidding all commerce with Sweden; the trade with which country was at that time of the utmost consequence to the English merchants. George having passed through Holland to Hanover, to secure his German dominions, entered into a new treaty with the Dutch and the regent of France, by which they agreed mutually to assist each other in case of an invasion; and for his further security, the commons granted him £.250,000. But the death of the Swedish monarch, who was soon after killed at the siege of Frederichshall, in Norway, put an end to all disquietude from that quarter. Among the many treaties for which this reign was remarkable, one had been concluded, which was called the *quadruple alliance*. It was agreed between the emperor, France, Holland, and Britain, that the emperor should renounce all pretensions to the crown of Spain, and exchange Sardinia for Sicily with the duke of Savoy; that the succession to the duchies of Tuscany, Parma, and

Placentia, should be settled on the queen of Spain's eldest son, in case the present possessor should die without male issue. This treaty, however, was by no means agreeable to the king of Spain, and consequently it became prejudicial to the British, as it interrupted the commerce with that kingdom. A war soon after commenced between Spain and the emperor, who was considered the principle contriver of the treaty; and a numerous body of Spanish forces was sent into Italy to support Philip's pretensions in that quarter. The regent of France attempted in vain to dissuade him, and the king of Britain offered his mediation with the like bad success; their interposition was considered as partial and unjust. A Spanish ship was then resolved on. A squadron of 22 ships, equipped with all expedition, the command of which was given to Sir George Byng, and ordered to sail for Naples, at that time threatened by the Spanish army. He was received with great joy by the Neapolitans; who informed him, that the Spaniards, to the amount of 30,000, were actually landed in Sicily. In this exigence, assistance could be given by land, he resolved to sail thither, fully determined to pursue the Spaniards in which the army was embarked. On coming round Cape Faro, he perceived several small Spanish vessels; and pursuing them, they led him to their main fleet, which, by noon, he discovered in line of battle, amounting in all to 27 sail. The Spaniards, however, notwithstanding their superiority in number, tempted to sail away; but finding it impossible to make their escape, they kept up a running fight, and the commanders behaved with great courage and activity; in spite of which, they were taken except three, which were preserved by conduct of their vice-admiral Cammoe, a native of Ireland. Sir George Byng behaved on the occasion with great prudence and resolution; the king wrote him a letter with his own hand approving his conduct. The rupture with France was thought to be favourable to the interests of the pretender; and it was hoped, that by the assistance of cardinal Alberoni the Spanish mission in Sicily and other parts of Europe, induced Philip to wish for a cessation of arms; and he consented to sign the quadruple alliance, by which means peace was again restored to Europe. tranquillity being thus established, the ministry proceeded to secure the dependency of the Irish parliament on that of England. One Maurice Annesley had appealed to the British house of commons from a decree made by the Irish peers, and the decree was reversed. The British peers ordered the barons of the exchequer in Ireland to put Annesley in possession of the lands he had lost.

decree of the lords of that kingdom. The barons obeyed this order; and the Irish peers passed a vote against them, as having attempted to diminish the just privileges of the parliament of that land; and at the same time ordered the barons to be taken under the custody of the black rod. On the other hand, the house of lords in England resolved, that the barons of the exchequer in Ireland had acted with great courage and fidelity; and addressed the king to signify his approbation of their conduct, by some marks of his favour. To complete their intention, a bill was prepared, which the Irish house of lords was deprived of right of final jurisdiction. This bill was opened in both houses, but particularly by the commons. It was there asserted by Mr Pitt, that it would only increase the power of the English lords, who were already but too formidable. Hungerford demonstrated, that the Irish lords always exerted their power of finally deciding issues. Notwithstanding all opposition, the bill was carried by a great majority, and soon after received the royal assent. This blow was severely felt by the Irish; but was by no means so great as which the English about this time felt from the SOUTH SEA scheme, which commenced in the year 1711. To explain this as concisely as possible, it must be observed, that ever since the solution under king William, the government having sufficient supplies granted by parliament, or what was granted requiring time to be collected, they were obliged to borrow money in several different companies of merchants; among the rest, from that company which dealt to the South Sea. In 1716, the government was indebted to this company about nine millions and an half of money; for which they paid at the rate of 6 per cent. interest. As this company was not the only one to which government was indebted, Sir Robert Walpole formed a design of lessening the national debts, by giving the several companies an alternative, either of accepting a lower interest, namely 5 per cent. or of repaying the principal. The different companies were rather to accept of the diminished interest than to be paid the principal. The South Sea company, in particular, having augmented their loan ten millions, were contented to receive 500,000l. annually as interest, instead of 600,000l. which they usually received. In the same manner, the Bank and company of the bank, and other companies, were contented to receive a diminished annual interest for their respective loans; all which greatly lessened the debts of the nation. In this situation of things, one Blount a scrivener proposed to the ministry, in the name of the South Sea company, to buy up all the debts of the different companies, and thus for the South Sea company to become the sole creditors of the state. The ministry offered to government were extremely advantageous. The South Sea company was to redeem the debts of the nation out of the hands of the private proprietors who were creditors to the government, upon whatever terms they could agree on; and for the interest of this money which they had so redeemed and taken into their own hands, they were to be contented to be allowed by government 4 per cent. for six years; after which the interest

should be reduced to 4 per cent. and should at any time be redeemable by parliament. For these purposes a bill passed both houses. But now came the part of the scheme big with fraud and ruin. As the directors of the South Sea company could not of themselves be supposed to possess so much money, as was sufficient to buy up the debts of the nation, they were empowered to raise it by opening a subscription to an imaginary scheme for trading in the South seas; from which commerce immense advantages were promised, and still greater expected by the rapacious credulity of the people. All the creditors of government, therefore, were invited to come in, and exchange their securities, viz. the security of government for that of the South Sea company. The directors' books were no sooner opened for the first subscription, than crowds came to make the exchange of government stock for South Sea stock. The delusion was artfully continued and spread. Subscriptions in a few days sold for double the price they had been bought at. The scheme succeeded beyond even the projector's hopes, and the whole nation was infected with a spirit of avaricious enterprise. The infatuation prevailed; the stock increased to a surprising degree, even to near ten times the value of what it was first bought for. After a few months, however, the people waked from their dream of riches; and found that all the advantages they expected were merely imaginary, while thousands of families were involved in one common ruin. Many of the directors, by whose arts the people were taught to expect such great benefits from a traffic to the South seas, had amassed considerable fortunes by the credulity of the public. It was some consolation, however, to the people, to find the parliament sharing in the general indignation, and resolving to strip those unjust plunderers of their possessions. Orders were first given to remove all the directors of the South Sea company from their seats in parliament, and the places they possessed under government. The principal delinquents were punished by a forfeiture of all such possessions and estates, as they had acquired during the continuance of this popular frenzy. The next care was to redress the sufferers. Several just and useful resolutions were taken by parliament, and a bill was speedily prepared for repairing the late sufferings, as far as the inspection of the legislature could extend. Of the profit arising from the South Sea scheme, the sum of 7 millions were given back to the original proprietors; several additions were made to their dividends out of what was possessed by the company in their own right; and the remaining capital stock was divided among the old proprietors at the rate of 33 per cent. In the mean time, petitions from all parts of the kingdom were presented to the house demanding justice; and the whole nation seemed exasperated to the highest degree. Public credit sustained a terrible shock. Some principal members of the ministry were deeply concerned in these fraudulent transactions. The bank was drawn upon faster than it could supply; and nothing was heard of but the ravings of disappointment, and the cries of despair. By degrees, however, the effects of this terrible calamity wore off, and matters returned to their former

mer tranquillity. A new war with Spain commenced. Admiral Hoyer was sent to South America to intercept the Spanish galleons: but the Spaniards being apprised of his design, relanded their treasure. The greatest part of the British fleet sent on that expedition was rendered entirely unfit for service. The seamen were cut off in great numbers by the malignity of the climate and the length of the voyage, while the admiral himself is said to have died of a broken heart. To retaliate these hostilities, the Spaniards undertook the siege of Gibraltar; but with as little success on their side. In this dispute France offered her mediation; and such a reconciliation as treaties could procure was the consequence; a temporary peace ensued; both sides only watching an opportunity to renew hostilities with advantage. Soon after the breaking up of the parliament in 1727, the king resolved to visit his electoral dominions of Hanover. Having appointed a regency in his absence, he embarked for Holland, and lay upon his landing at a little town called *Voet*. Next day, he proceeded on his journey; and in two days more, between 10 and 11 at night, arrived at Delden, to all appearance in perfect health. He supped there very heartily, and continued his journey early the next morning; but between 8 and 9 ordered his coach to stop. It being perceived that one of his hands lay motionless, monsieur Fabrice, who had formerly been servant to the king of Sweden, and who now attended king George, attempted to quicken the circulation, by chafing it between his own. As this had no effect, the surgeon who followed on horseback was called, and he rubbed it with spirits. Soon after, the king's tongue began to swell, and he had just strength enough to bid them hasten to Osnaburgh. Then, falling insensible into Fabrice's arms, he never recovered; but expired about 11 o'clock the next morning, in the 68th year of his age and 13th of his reign. His body was conveyed to Hanover, and interred among his ancestors.

(79.) ENGLAND, HISTORY OF, UNTIL THE END OF WALPOLE'S ADMINISTRATION. On the accession of George II. the two great parties into which the nation had so long been divided, again changed their names, and were now called the *court* and *country* parties. Throughout the greatest part of this reign, there seem to have been two objects of controversy, which rose up in debate at every session, and tried the strength of the opponents; these were the national debt, and the number of forces to be kept in pay. The government on the king's accession owed more than 30 millions sterling; and though there was a long continuance of profound peace, yet this sum was constantly increasing. It was much wondered at by the country party how this could happen, and it was as constantly the business of the court to give plausible reasons for the increase. Thus demands for new supplies were made every session of parliament, either for the purpose of securing friends upon the continent, or guarding the kingdom from internal conspiracies, or of enabling the ministry to act vigorously in conjunction with the powers in alliance abroad. It was in vain alleged, that those expences were incurred without precidence or necessity; and that the increase of the

national debt, by multiplying and increasing taxes, would at last become an intolerable burden to the poor. These arguments were offered, canvassed, and rejected; the court party was constantly victorious, and every demand was granted with cheerfulness and profusion. The next thing worthy of notice in the reign of George II. is the *charitable corporation*. A society of men had united themselves into a company by this name; and their professed intention was to lend money at legal interest to the poor upon small pledges, and to persons of higher rank upon proper security. Their capital was at first limited to L.30,000, but they afterwards increased it to L.600,000. This money was supplied by subscription, and the care of conducting the capital was intrusted to a proper number of directors. This company having continued for more than 20 years, the cashier, George Robinson, member for Marlow, and the warehouse keeper, John Thomson, disappeared one day. L.500,000 of capital were found to be gone, or embezzled, by means which the proprietors could not discover. They therefore in a petition represented to the house the manner in which they had been defrauded, and the distress to which many of the petitioners were reduced. A select committee being appointed to examine into this grievance, a most iniquitous scene of fraud was soon discovered, which had been carried on by Thomson and Robinson, in concert with some of the directors for embezzling the capital and cheating the proprietors. Many persons of rank and quality were concerned in this infamous conspiracy; and even some of the first characters in the nation did not escape censure. No less than six members of parliament were expelled for the most sordid acts of knavery. Sir Robert Sutton, Sir Archibald Grant, and George Robinson, for their frauds in the management of the charitable corporation scheme; Dennis Bond, and serjeant Burch, for a fraudulent sale of the late unfortunate earl of Derwentwater's estate; and, John Ward of Hackney, for forgery. It was at this time asserted in the house of lords, that not one shilling of the forfeited estates was ever applied to the service of the public, but became the reward of fraudulence and venality. This happened in the year 1733. In 1732, a scheme was formed by Sir Robert Walpole of fixing a general excise. He introduced it by recounting the frauds practised by the factors in London that were employed in selling the American tobacco. To prevent these frauds, he proposed, that instead of having the customs levied in the usual manner upon tobacco, all hereafter to be imported should be lodged in warehouses appointed for that purpose by the officers of the crown; and should from thence be sold, upon paying the duty of 4d. per pound, when the proprietor found a purchaser. This proposal raised a violent ferment both within doors and without. At last, the fury of the people was worked up to such a pitch, that the parliament house was surrounded by multitudes, who intimidated the ministry, and compelled them to drop the design. The miscarriage of the bill was celebrated with public rejoicings in London and Westminster, and the minister was burnt in effigy by the populace at London. On this occasion an attempt was

de to repeal the septennial bill, and bring back annual parliaments, as settled at the Revolution; notwithstanding the warmth of the opposition, ministry, exerted all their strength, were victorious, and the motion was suppressed by the majority. However, as on this occasion, the country seemed to have gained strength, it was thought proper to dissolve the parliament; and there was called by the same proclamation. The same disputes were carried on in this parliament as in the former. New subjects of controversy offered every day, and both sides were eager to seize them. A convention agreed on by ministry at the Brado with Spain, became an object of warm altercation. By this the court of Spain agreed to pay L.95,000 to the English, as satisfaction for all demands; and to discharge the whole in four months from the day of ratification. This, however, was considered as not equivalent to the damages that had been sustained, which were said to amount to L.340,000. On this occasion the minister was provoked into unusual vehemence, and branded the opposite party with the appellation of traitors. The ministry, however, were victorious; and the country party finding themselves out-numbered and out-voted every debate, resolved to withdraw for ever: a policy being thus left without opposition, took the opportunity of passing several useful laws in their absence, in order to render the opposite party odious or contemptible. In 1739, a new war commenced with Spain. Ever since the treaty of Utrecht, the Spaniards in America had insulted and distressed the commerce of Great Britain; and British merchants had endeavoured to carry on an illicit trade in their dominions. As a right of cutting logwood in the bay of Campeachy, claimed by the British, gave them frequent opportunities of pushing in contraband commodities on the continent, the Spaniards resolved to put a stop to the evil, by refusing liberty to cut logwood in that place. The Spanish guarda-costas renewed their severities upon the British, and many British subjects were sent to dig in the mines of Potosi. One remonstrance followed another to the court of Madrid; but the only answers given were promises of inquiry, which produced no redress. In 1739, war was declared with all solemnity; and soon after, admiral Vernon, with six ships only, destroyed all the fortifications of Porto Bello, and came away victorious without the loss of a man. As the war was thus successfully begun, supplies were cheerfully granted to prosecute it with all imaginable vigour. Commodore Anson was sent with a squadron of ships to distress the enemy in the South seas, and to operate occasionally with admiral Vernon at the isthmus of Darien. This squadron was ordered to act a subordinate part to a formidable armament that was to be sent against New Spain; but, through the mismanagement of the ministry, these schemes were frustrated. Anson was detained till too late in the season; he then set out in five ships of the line, a frigate, and two store-ships, with about 1400 men. Coming into the Bay of South seas at a very wrong season of the year, he encountered the most terrible storms; his fleet was dispersed, and his crew deplorably

afflicted with the scurvy; so that with much difficulty he gained the delightful island of Juan Fernandez. Here he was joined by one ship and a frigate of 7 guns. From thence sailing along the coast of Chili, he plundered and burnt the town of Paita. He next traversed the great pacific ocean, in hopes of meeting with one of the immensely rich galleons that trade from the Philippine islands to Mexico. Having refreshed his men at the island of Tinian, he set forward for China; and returning the same way he came, at last discovered the galleon. Her he engaged and took; and with this prize, valued at L.313,000, together with other captures to the value of about as much more, he returned home after a voyage of three years. By this expedition the public sustained the loss of a fine squadron of ships, but a few individuals became possessed of immense fortunes. The other expedition ended more unfortunately. The armament consisted of 29 ships of the line, and almost an equal number of frigates, furnished with all kinds of warlike stores, near 15,000 seamen, and as many land forces. The most sanguine hopes of success were entertained; but the ministry detained the fleet without any visible reason, till the season for action in America was almost over. At last, however, they arrived before the wealthy city of Carthagena. They soon became masters of the strong forts which defended the harbour. But though by this means they advanced a good deal nearer the town, they found great difficulties still before them. It was asserted, that the fleet could not lie near enough to batter the town, and therefore the remaining forts must be attempted by escalade. This dangerous experiment was tried; the guides were slain by the enemy's fire, and then the forces mistook their way. Instead of attempting the weakest place of the fort, they attacked the strongest, and where they were exposed to the fire of the whole town. Their scaling ladders, were two short; and, at last, after bearing a dreadful fire with great resolution for some hours, they retreated, leaving 600 men dead on the spot. The terrors of the climate now began to be more dreadful than those of war. The rainy season commenced with such violence, that it was impossible for the troops to continue their encampment. To these calamities was added the dissension between the sea and land commanders, who blamed each other, and at last could be only brought to agree in one mortifying measure, viz. to re-embark the troops, and withdraw them as quick as possible. The miscarriage of this enterprise produced the greatest discontents; especially as other causes of complaint were now joined with it. Sir John Norris had twice sailed to the coast of Spain, at the head of a very powerful squadron, without doing any thing to the purpose. The commerce of Britain was greatly annoyed by the Spanish privateers, who had taken 407 ships since the commencement of the war; while the British fleets seemed to be quite inactive, and to suffer one loss after another, without endeavouring in the least to make proper reprisals. These discontents burst all at once upon Sir Robert Walpole; a majority in the house of commons was formed against him; he was created earl of Oxford, and he resigned all his employments.

(80.) ENGLAND, HISTORY OF, UNTIL THE EXTINCTION OF THE REBELLION IN 1745. The removal of Sir Robert gave universal satisfaction. His antagonists entertained great hopes of seeing him punished; but he had laid his schemes too well to be under any apprehensions; and what was worse, the new ministry were no sooner got in, than they trod in the footsteps of those they had so much exclaimed against. The nation had now become disgusted with naval operations. The people wished for a renewal of their victories in Flanders, and the king ardently joined in the same wish. An army of 16,000 men was therefore shipped over into Flanders, to take part in the quarrels that were then beginning on the continent. Immense triumphs were expected from this undertaking; but they forgot that the army was not now commanded by the duke of Marlborough. To trace the origin of these continental quarrels, it is necessary to go back for some years. After the duke of Orleans, who had been regent of France, died, cardinal Fleury undertook to settle the confusion in which the kingdom was then involved. Under him France repaired her losses, and enriched herself by commerce. During the long interval of peace which this minister's councils had procured for Europe, two powers, till now unregarded, began to attract the notice and jealousy of the neighbouring nations. These were Russia and Prussia. The other states were but little prepared to renew war. The empire remained under the government of Charles VI. who had been placed upon the throne by the treaty of Utrecht. Sweden continued to languish from the destructive projects of Charles XII. Denmark was powerful enough, but inclined to peace; and part of Italy still remained subject to those princes who had been imposed upon it by foreign treaties. All these states, however, continued to enjoy a profound peace, until the death of Augustus king of Poland, by which a general flame was once more kindled in Europe. The emperor, assisted by the arms of Russia, declared for the elector of Saxony, son to the deceased king. On the other hand, France declared for Stanislaus, who had long before been nominated king of Poland by Charles XII. of Sweden, and whose daughter the king of France had since married. Stanislaus was gladly received at Dantzic, and acknowledged king of Poland; but here he was besieged by 10,000 Russians, the city taken, and he himself with difficulty made his escape. France, however, still resolved to assist him; as this, it was thought, would be the most effectual method of distressing the house of Austria. These views of France were seconded by Spain and Sardinia, both of which hoped to grow rich by the spoils of Austria. A French army, therefore, over-ran the empire, under the conduct of old marshal Villars; while the duke of Montemar, the Spanish general, was equally victorious in the kingdom of Naples. The emperor was soon obliged to sue for peace; which was granted, but Stanislaus was neglected in the treaty. It was stipulated that he should renounce all claim to the kingdom of Poland; for which the emperor gratified France with the duchy of Lorraine and some other valuable territories. The emperor Charles VI. dying Oct. 20, 1740, the

French court began to think this a favourable opportunity for exerting their ambition. Regardless of treaties, therefore, particularly that called the *Pragmatic Sanction*, by which the late emperor's dominions were settled upon his daughter, Mary Theresa, they caused the elector of Bavaria to be crowned emperor. Thus the queen of Hungary, was at once stripped of her inheritance, and left for a whole year deserted by all Europe, and without any hopes of succour. At the same time she lost the province of Silesia by an irruption of the young king of Prussia, who renewed his pretensions to that province, of which his ancestor had been unjustly deprived. France, Saxony, and Bavaria, attacked the rest of her dominions: but Britain was the only ally that seemed willing to assist her; in which, however, Sardinia, Holland, and Russia, soon after concurred. It must be owned that Britain had no other reason for interfering in these disputes, than that the security of the electorate of Hanover depended upon nicely balancing the different interests of the empire; and the allies were willing to gratify the king. His majesty formed the parliament, that he had sent a body of British forces into the Netherlands, which had augmented by 16,000 Hanoverians, to make a diversion upon the dominions of France, in favour of the queen of Hungary. When the supplies came to be considered, by which this additional number of Hanoverian troops was to receive pay from Britain for defending their own cause, most violent parliamentary debates ensued; but the ministry carried their point by the strength of numbers. But however prejudicial these continental measures might be to the true interests of Great Britain, they effectually retrieved the queen of Hungary's desperate affairs, and soon began to turn the scale of victory on her side. The French were driven out of Bohemia. Her general, prince Charles, at the head of a large army, invaded the dominions of Bavaria. Her rival, the emperor, was obliged to fly before her; and being abandoned by his allies, and stripped even of his hereditary dominions, retired to Frankfurt where he lived in obscurity. In the mean time the British and Hanoverian army advanced, in order to effect a junction with that of prince Charles of Lorraine, in which case they would have outnumbered their enemies. To prevent this, the French opposed an army of 60,000 men, under the command of the marshal de Noailles, who posted his troops on the east side of that river. The British army was commanded by the earl of Stair, who had learned the art of war under the great prince Eugene; nevertheless, he suffered himself to be inclosed by the enemy on every side, near Dettingen. See DETTINGEN, N° 2. In this situation the whole army, with the king himself, who by this time arrived in the camp, must have been taken, had the French behaved with prudence. Their impetuosity, however, saved the army. They passed a defile which they ought to have contented themselves with guarding; and, under the conduct of the duke of Gramont, they charged the British foot with great fury. They were received with great resolution; and at last obliged to repass the Mayne with precipitation and the loss of about 5000 men. Though the

were victorious in this engagement, the French were very little disconcerted by it. They opposed prince Charles, and interrupted his attempts pass the Rhine. In Italy they also gained some advantages; but their chief hopes were placed on intended invasion of England. From the violence of parliamentary disputes in England, France had been persuaded that the country was ripe for revolution, and only wanted the presence of the tender to bring about a change. An invasion was therefore actually projected. The troops destined for the expedition amounted to 15,000; and preparations were made for embarking them at Antwerp and some of the ports nearest to England, under the eye of the young pretender. The duke of Burgundy, with 20 ships of the line, was to land them safely landed on the opposite shore, and the famous count Saxe was to command them on land. But the whole project was disconcerted by the appearance of Sir John Norris, who with a superior fleet made up to attack them. The French fleet was obliged to put back; a very hard gale of wind damaged their transports beyond repair; and the French, now frustrated in their hope of a sudden descent, openly declared war. It was a national joy for Sir John Norris's success, but it was soon damped by the miscarriage of admirals Matthews and Lestock; who, through misunderstanding between themselves, suffered the French fleet of 34 sail to escape them near Toulon. In the Netherlands the British arms were attended with still worse success. The French there assembled an army of 120,000 men, commanded by count Saxe, natural son to the late king of Poland, an officer of great experience. The English were headed by the duke of Cumberland, who had an inferior army, and was much inferior in the knowledge of war to the French general. Count Saxe, therefore, carried all before him. In 1743, he besieged Fribourg, and in the ensuing of the campaign 1744, invested the English city of Tournay. To save this place, if possible, the allies resolved to hazard an engagement; and on this ensued the bloody battle of Fontenoy, in which the allies left on the field of battle near 12,000 men, and the French almost an equal number. In consequence of this victory, the army was soon after taken by the French. To avenge this bad success, however, admirals Rowley and Warren had retrieved the honour of the British flag, and made several rich captures at sea. Fort St. Louis, a place of great consequence to the British commerce, surrendered to the French; while a short time after, two British East India ships, and a Spanish ship from the East, laden with treasure, put into the harbour, and were taken. During this gleam of returning success, Charles Edward, the son of James, the old pretender to the British crown, resolved to make an attempt to recover what he called his right. Being furnished with some money from France, he embarked for Scotland aboard a small frigate, accompanied by the marquis of Tullibardine, Sir Thomas Sheridan, and some others; and for the conquest of the whole British empire, only brought with him 60 officers and arms for 2000 men. Fortune, however, seemed not more favourable to this attempt.

tempt than to the former. His convoy, a ship of 60 guns, was so disabled in an engagement with an English man of war, that it was obliged to return to Brest, while he continued his course to the western parts of Scotland. On the 27th of July 1745, he landed on the coast of Lochaber, and was soon joined by the Highlanders to the number of 1500; the ministry at first could scarcely be induced to credit his arrival; but when they could no longer doubt of it, they sent Sir John Cope with a small body of forces to oppose his progress. By this time the young adventurer was arrived at Perth, where he performed the ceremony of proclaiming his father king of Great Britain. From thence proceeding towards Edinburgh, and his forces continually increasing, he entered the capital without opposition; but was unable, from want of cannon, to reduce the castle. Here he again proclaimed his father; and promised to dissolve the union, which was considered as one of the national grievances. In the mean time, Sir John Cope being reinforced by two regiments of dragoons, resolved to give the enemy battle. The rebels attacked him near Prestonpans, and in a few minutes put him and his troops to flight, with the loss of 500 men. This victory gave the rebels great influence; and had the pretender marched directly to England, the consequence might have been fatal to freedom. But he was amused by the promise of succours which never came; and thus induced to remain in Edinburgh till the season for action was lost. He was joined, however, by the earl of Kilmarnock, lord Balmerino, lords Cromarty, Elcho, Ogilvy, Pittligo, and the eldest son of lord Lovat, who with their vassals considerably increased his army. Lord Lovat himself, so remarkable for his treachery, was an enthusiast in favour of the pretender, but was unwilling to act openly for fear of the ministry. But while Charles was thus trifling away his time at Edinburgh, the British ministry were taking effectual methods to oppose him: 6000 Dutch troops, that had come over to the assistance of the crown, were dispatched northward under the command of general Wade; but, as it was then said, these could lend no assistance, being prisoners of France upon their parole, and under engagements not to oppose that power for a year. But however this be, the duke of Cumberland soon after arrived from Flanders, and was followed by another detachment of dragoons and infantry, well disciplined and inured to action; and besides these, volunteers offered themselves in every part of the kingdom. At last, Charles resolved upon an irruption into England. He entered that country by the western border, and took Carlisle; after which he continued his march southwards, having received assurances that a considerable body of forces would be landed on the southern coasts, to make a diversion in his favour. He established his head quarters at Manchester, where he was joined by about 200 English formed into a regiment, under the command of colonel Townley. From thence he pursued his march to Derby, intending to go by the way of Chester into Wales, where he hoped to be joined by a great number of malecontents; but in this he was prevented by the factions among his followers. Being now advanced

within 100 miles of London, that capital was in the utmost consternation; and had he proceeded with the same expedition he had hitherto used, perhaps he might have made himself master of it. But he was rendered incapable of pursuing this or any other rational plan, by the discontents which began to prevail in his army. In fact, the young pretender was but the nominal leader of his forces; his generals, the Highland chiefs, being averse to subordination, and ignorant of command. They were now unanimous in their resolution to return to their own country, and Charles was forced to comply. They retreated towards Carlisle without any loss; and from thence crossing the rivers Eden and Solway, entered Scotland. They next marched to Glasgow, which they laid under severe contributions. From thence advancing to Stirling, they were joined by Lord Lewis Gordon, at the head of some forces which had been assembled in his absence. Other clans likewise came in; and from some supplies of money received from Spain, and some skirmishes with the royalists, in which he was victorious, the pretender's affairs began to wear a more promising aspect. Being joined by lord Drummond, he invested the castle of Stirling, in the siege of which much time was consumed to no purpose. General Hawley, who commanded a considerable body of forces near Edinburgh, undertook to raise this siege, and advanced towards the rebel army as far as Falkirk. After two days spent in mutually examining each others strength, an engagement ensued, in which the king's forces were entirely defeated, with the loss of their tents and artillery. This was the last triumph of the rebel army. The duke of Cumberland having arrived, was put at the head of the troops at Edinburgh, which amounted to about 14,000 men. With these he advanced to Aberdeen, where he was joined by several of the nobility attached to the house of Hanover; the enemy in the mean time retreating before him. He next advanced to the banks of the Spey, where the rebels might have disputed his passage; but their contentions with one another were now risen to such a height, that they could scarce agree in any thing. At last they resolved to wait their pursuers. An engagement ensued at Culloden, in which the rebels were defeated with great slaughter, and a final period was put to all the hopes of the young adventurer. (See CULLODEN.) The conquerors behaved with the greatest cruelty; refusing quarter to the wounded, the unarmed, and the defenceless; some were slain who had only been spectators of the combat, and the king's soldiers anticipated the base employment of the executioner. The duke immediately after the action ordered 36 deserters to be executed; the conquerors spread terror wherever they came; and after a short space, the whole country round was one dreadful scene of plunder, slaughter, and desolation. Thus the duke of Cumberland, notwithstanding his important victory, deprived himself of the only true glory of a conqueror; lost the opportunity of eternizing his fame by a piece of well timed clemency, not to add good policy; and sunk his character to a level with those of the most barbarous butchers among the most vindictive savages. Prince Charles after a variety of

surprising adventures and narrow escapes, (See STUART,) arrived safely in France, notwithstanding the highest rewards were offered to apprehend him, and the most diligent pursuit was made after him. Meantime the scaffolds and gibbets were erected for his adherents; 17 officers were hanged, drawn, and quartered, at Kennington common in the neighbourhood of London; 9 at Carlisle, and 11 at York. A few obtained pardon, and a considerable number were transported to America. The earls of Kilmarnock and Cromarty, and lord Balmerino, were tried and found guilty of high treason. Cromarty was pardoned, but Kilmarnock and Balmerino were executed, as was also Mr Radcliffe brother to the late earl of Derwentwater, who was sentenced upon a former conviction. Lord Lovat was tried, and suffered some time after.

(81.) ENGLAND, HISTORY OF, UNTIL THE GERMAN WAR. Immediately after the suppression of the rebellion, the legislature took to establish several regulations in Scotland which were equally conducive to the happiness of the people, and the tranquillity of the united kingdoms. The Highlanders had till that time continued to wear the military dress of their ancestors, and never went without arms. In consequence of this, they considered themselves a body of people distinct from the rest of the nation, and were ready upon the shortest notice to second the insurrections of their chiefs. Their habits were now reformed by an act of legislation, and they were compelled to wear clothes of common fashion. But what contributed still more to their real felicity was, the abolition of that hereditary jurisdiction which their chieftains could exercise over them. The power of their chieftains was totally destroyed, and every subject in that part of the kingdom was granted a participation in common liberty. Soon after the battle of Culloden, the duke of Cumberland returned to Flanders, where he resumed the command of an army, which he was by no means equal. The French carried every thing before them; and they resumed under their dominion all those strong towns which had been taken by the duke of Marlborough. They formed a barrier to the United Provinces. They gained a considerable victory at Roucoux; which, however, cost them as many men as they destroyed of the enemy; but these they could more easily spare, as they were much more numerous. Another victory, which they obtained at La Potherie, served to depress the allied army still lower. The taking of Bergen op Zoom, the strongest fortification of Brabant, reduced the Dutch to a state of desperation. These victories of the French in Flanders were, however, counterbalanced by most equal disappointments. In Italy the marquis of Belleisle's brother, attempting to penetrate at the head of 34,000 men into Piedmont, was defeated and killed. A fleet was fitted out for the recovery of Cape Breton, but without success. Two others were fitted out, the one to make a descent upon the British colonies in America, and the other to carry on the operations in the East Indies; but these were attacked by Anson and Warburton, and nine of their ships taken. Not long after this, commodore Fox, with six ships of war, was

above 40 French ships richly laden from St Domingo; and soon after, the French fleet was destroyed by admiral Hawke, who took 7 ships of the line and several frigates. For a long time Louis XV. had been desirous of a general tranquillity; and this desire he had even expressed to Sir John Ligonier, who was taken prisoner at the battle of La Feldt. But now the bad success of his arms at sea, and his armies in Italy, the present bankruptcies of his merchants at home, the election of a Stadtholder in Holland, who was a spirit to the opposition; all these contributed to make him weary of the war, and to propose terms of accommodation. This was what the allies had long wished for, but had been ashamed to demand. A congress, therefore, was held at La Chapelle, where a treaty was concluded on the following terms: 1. That all prisoners on each side should be mutually given up, and all countries restored. 2. That the Duchies of Parma, Piacenza, and Guastalla, should be ceded to Philip, heir apparent to the Spanish crown; and that the dominions should return to the Emperor of Austria. 3. That the fortifications of Dunkirk towards the sea should be demolished; and that the British ship annually sent with Daves to the coast of New Spain should have this privilege continued for four years. 4. That the king of Prussia should be confirmed in the possession of Silesia, and that the queen of Hungary should be secured in the possession of her patrimonial dominions. But the most mortifying clause was, that the king of Great Britain should immediately, on the ratification of this treaty, send two persons of rank to France as hostages, until restitution should be made of Cape Breton and all other British conquests made during the war. No mention was made of the searching British vessels in the American seas, though this was the original cause of the quarrel. The limits of their respective possessions in North America were not altered; nor did they receive any equivalent for the forts which they restored to the enemy. In 1751, died Frederic prince of Wales, a pleurisy, thought at first to be no way dangerous. He was greatly regretted; for his goodness had rendered him popular, and those who opposed administration had grounded all their hopes of redress upon his accession to the throne. Some time before this, viz. in 1749, a scheme was entered upon, which the nation in general regarded would be very advantageous. This was encouraging those who had been discharged from the army or navy to become settlers in Nova Scotia. On account of this cold and barren spot, the English and French renewed the war, which soon after spread with such terrible devastation over every part of the globe. The possession of the country was reckoned necessary to defend the British colonies to the north, and to preserve their superiority in the fisheries in that part of the world. The French, however, who had been long settled in the back parts, resolved to use every method to dispossess the new comers, and to spread up the Indians to begin hostilities. Another source of dispute also sprung up soon after, in the same part of the world. The French pre-

tending to have first discovered the mouth of the river Mississippi, claimed the whole adjacent country towards New Mexico on the east, quite to the Apalachian mountains on the west. In order to assert their claims, as they found several English people who had settled beyond these mountains, they dispossessed them of their new settlements, and built such forts as would command the whole country. Negotiations, mutual accusations, and hostilities, first took place between the two powers; at length, in 1756, four operations were undertaken by the British in America at once. Colonel Monkton had orders to drive the French from their encroachments upon the province of Nova Scotia. General Johnson was sent against Crown Point; general Shirley against Niagara, to secure the forts on the river; and general Braddock against Fort du Quefne. In these expeditions, Monkton was successful; Johnson also was victorious, though he failed in taking the fort against which he was sent; Shirley was thought to have lost the season of operation by delay; and Braddock was defeated and killed. In return for this bad success, the British made reprisals at sea; and in this they were so successful, that the French navy was unable to recover itself during the continuance of the war, that was shortly after declared on both sides.

(82.) ENGLAND, HISTORY OF, UNTIL THE LATE KING'S DEATH, AND THE ACCESSION OF K. GEORGE III. The first step taken by the French was to threaten an invasion. Several bodies of their troops were sent down to the coasts that lay opposite to the British shores; these were instructed in the manner of embarking and relanding from flat-bottomed boats, which were made in great numbers for that expedition. The number of men amounted to 50,000: but all discovered the utmost reluctance to the undertaking. The ministry were greatly alarmed. They applied to the Dutch for 6000 men, which they were by treaty obliged to furnish in case of an invasion. This supply was refused; the Dutch alleging, that their treaty was to send the troops in case of an actual, and not a threatened, invasion. The king, therefore, finding he could not have the Dutch forces till their assistance would be too late, desisted entirely from his demand; and the Dutch with great amity returned him thanks for withdrawing his request. Upon this, 10,000 Hessians and Hanoverians were brought over. But this occasioned great discontent. The ministry were reviled for such disgraceful condescension, as if the nation was unable to defend itself. The people only demanded a vigorous exertion of their own internal strength, and then feared no force that could be led to invade them. The British invasion, however, never took place; but a French army landed in Minorca, and invested the citadel of St Philips, which was reckoned the strongest in Europe; but the garrison was weak, and no way fitted to stand a vigorous siege. To raise this siege, admiral Byng was dispatched with a squadron of ten men of war, with orders to relieve Minorca, or at any rate to throw a body of troops into the garrison. This last he reckoned too hazardous an undertaking; nor did he even attempt it.

Soon after, a French fleet appeared nearly equal in force to his own; but the admiral resolved to act only upon the defensive. The French advanced; a slight engagement ensued with part of the English fleet; after which the French slowly sailed away, and another opportunity never occurred of coming to a closer engagement. After this, it was resolved in a council of war, to return to Gibraltar to rest, and that the relief of Minorca was impracticable. For this conduct Byng was brought home under arrest, tried, and sentenced to be shot. He suffered with the greatest resolution, after delivering a paper filled with protestations of his innocence as to any treacherous intention. After the conquest of Minorca, the French declared that they would revenge all injuries they should sustain in their colonies, on the king of Britain's dominions in Germany. Upon this, the court of London, eager to preserve Hanover, entered into a treaty with the court of Russia, by which it was stipulated, that a body of 50,000 Russians should be ready to act in the British service, in case Hanover should be invaded by the French. For this the czarina was to receive 100,000*l.* annually, to be paid in advance. This treaty was opposed by the king of Prussia. He had long considered himself as guardian of the interests of Germany, and was therefore alarmed at a treaty which threatened to deluge the empire with an army of barbarians. Besides, he was already apprised of an agreement between the Austrians and Russians, by which the latter were to enter the empire and strip him of his late conquest of Silesia. He therefore declared, that he would not suffer any foreign forces to enter the empire either as auxiliaries or principals. The king of Britain now found himself obliged to drop his Russian connection, and conclude a treaty with the king of Prussia. As both monarchs wished only to prevent the invasion of Germany, they soon came to an agreement to assist each other mutually. From this alliance a new combination took place among the European powers, quite opposite to the former; and their forces were drawn out in the following manner. Britain opposed France in America, Asia, and on the ocean. France attacked Hanover; which the king of Prussia undertook to protect, while Britain promised him troops and money to assist his operations. Austria had their aims on the dominions of Prussia, and drew the elector of Saxony into the same designs. In these views the Austrians were seconded by France, Sweden, and Russia, who had hopes of acquiring a settlement in the west of Europe. Thus the king of Prussia lanced into the tumult of war, having only the king of Britain for his ally, while the most potent states of Europe were his antagonists. He now performed exploits perhaps unequalled in the annals of modern ages; for a particular account of which, see PRUSSIA. The British ministry, in order to procure a diversion in his favour, planned an enterprise against the coast of France. The destination of the fleet equipped for this purpose was kept a profound secret. At last it appeared before Rochford; where the commanders trifled away their time in deliberating how to proceed, secured the little island of

Aix, an easy and an useless conquest: soon after which, they returned home, without attempting any thing else. By this miscarriage the ministry were so discouraged that they had thoughts of abandoning the king of Prussia to his fate; and the king was actually meditating a negotiation of this nature, when he was prevented by the expostulations of his distressed ally. From motives of generosity, therefore, more than of interest, it was resolved to continue to assist him; and success, which had long fled from the British arms, once more began to return with double splendour. It was in the East Indies where this returning success first began to appear (for an account of which see INDOSTAN); and their conquests in the western part of the world were about this time still more splendid than those in the east. But their successes must, partly at least, be ascribed to the vigorous administration of Mr William Pitt, who about this time came into power. An expedition was set on foot against Cape Breton, under general Amherst and admiral Boscawen; another, under general Abercrombie, against Crown Point and Ticonderago; and a third, under brigadier general Forbes, against Fort du Quebec. The fortress of Louisbourg, which defended the mouth of Cape Breton, was very strong both by nature and art; the garrison was numerous, the commander vigilant, and every precaution had been taken to prevent a landing. But the activity of the British surmounted every obstacle, the place was surrendered by capitulation, and its fortifications were demolished. The expedition against Fort du Quebec was equally successful; but not against Crown Point once more miscarried. General Abercrombie attacked the French in their entrenchments, was repulsed with great slaughter, and obliged to retire to his camp at Lake George. But though in this respect the British arms were unsuccessful, yet, upon the whole, the campaign of 1758 was greatly in their favour. The taking of Fort du Quebec served to remove from their colonies the terror of the incursions of the Indians; while it interrupted the correspondence along a chain of forts, with which the French had surrounded the British settlements in America; so that the succeeding campaign promised great success. In 1759, it was resolved to attack the French in several parts of their empire at once. General Amherst with a body of 12,000 men was commanded to attack Crown Point; General Wolfe was to undertake the siege of Quebec; while general Prideaux and Sir William Johnson were to attempt a French fort near the cataracts of Niagara. This last expedition was the first that succeeded. The siege was begun with vigour, and promised an easy conquest; but general Prideaux was killed in the trenches by the bursting of a mortar, so that the whole command devolved on general Johnson. A body of French troops attempted to relieve it, but were defeated and dispersed; soon after which, the garrison surrendered prisoners of war. On his arrival at the foot of Crown Point and Ticonderago, general Amherst found them deserted and destroyed. There now remained, therefore, but one decisive blow to reduce all North America under the British dominion;

nion; and this was by the taking of Quebec, capital of Canada. (See QUÉBEC.) This expedition was commanded by admiral Saunders general Wolfe. The enterprise was attended difficulties which appeared unsurmountable; all these were got over by the conduct of general Wolfe, and the bravery of his men. He engaged and put to flight the French under Montcalm; but, to the great regret of the British, their general was killed in the action. The surrender of Quebec was the consequence of this victory, which was soon followed by the cession of all Canada. The following season, indeed, the French made a great effort to recover the city; but by the resistance of governor Murray, and the appearance of a British fleet under the command of lord Colby, they were obliged to abandon the enterprise. The whole province was soon after reduced by general Amherst, who obliged the French army to capitulate, and it has since remained annexed to the British empire. About the same time the island of Guadaloupe was reduced by commodore Boscawen and general Hopson. The British affairs in Germany had at the beginning of the war worn a very unfavourable aspect. The Hanoverians were commanded by the duke of Cumberland, who was greatly outnumbered by the enemy. He was driven beyond the Weser, the passage of which had been disputed, but the French were obliged to pass it unmolested. The Hanoverians driven from one part of the country to another, till at length they made a stand near Hastenbeck, where it was hoped the numbers of the enemy would have the least opportunity of bringing to a general engagement. The Hanoverians, however, left the field of battle to the enemy, after a faint resistance. Their enemies pursued, and the duke retired towards Stade; which means he marched into a country, from whence he could neither procure provisions nor attack the enemy with any hopes of success. Being unable either to escape or advance, he was compelled to sign a capitulation, by which his whole army laid down their arms, and were dispersed into different quarters of cantonment. His remarkable capitulation, which was called *capitulation of Closter Seven*, Hanover was obliged to submit quietly to the French, who were determined to turn their arms against the king of Prussia. Soon after this capitulation, both sides began to complain that the treaty was not strictly observed. The Hanoverians exclaimed at the rapacity of the French general and the cruelty of his soldiers. The French retorted charge, accused them of insolence and insurrection, and being sensible of their own superiority, resolved to bind them strictly to their terms of agreement. The Hanoverians only wished for a peace to take arms, and a general to head them. Neither was long wanting. The operations of the tax gatherers, whom the French had appointed, were considered as so severe, that the army rose to vindicate the freedom of their country, while Ferdinand, prince of Brunswick, placed himself at their head. As soon as this was known in Britain, large supplies were granted for the service of the king of Prussia, and to

enable the Hanoverian army to act vigorously in conjunction with him. A small body of British forces was sent over to join prince Ferdinand under the duke of Marlborough. After some considerable successes at Crevelt, the duke of Marlborough dying, the command of the British forces devolved on lord George Sackville. A misunderstanding arose between him and prince Ferdinand, which appeared at the battle of Minden that was fought shortly after. Lord George pretended, that he did not understand the orders sent him by the prince, and of consequence did not obey them. The allies gained the victory, which would have been more decisive had the British commander obeyed his orders. He was soon after recalled, tried by a court martial, found guilty of disobedience, and declared incapable of serving in any military command. After this victory it was imagined, that one reinforcement more of British troops would terminate the war in favour of the allies; and that reinforcement was quickly sent. The British army in Germany was augmented to upwards of 30,000 men, and sanguine hopes of conquest were generally entertained. These hopes, however, were soon found to be ill founded. The allies were defeated at Corbach; but retrieved their honour at Exdorf. A victory at Warbourg followed shortly after, and another at Zierenberg; but they suffered a defeat at Camperdown; after which, both sides retired into winter quarters. On the 25th of October 1760, king George II. died. He had risen at his usual hour, and observed to his attendants, that as the weather was fine, he would take a walk into the gardens of Kensington, where he then resided. In a few minutes after his return, being left alone, he was heard to fall down upon the floor. The noise of this bringing his attendants into the room, they lifted him into bed; where he expired with a faint voice, that the princess Amelia might be sent for; but before she could reach the apartment, he expired, in the 77th year of his age, and 33d of his reign. An attempt was made to bleed him, but without effect; and afterwards the surgeons, upon opening him, discovered that the right ventricle of the heart was ruptured, and a great quantity of blood discharged through the aperture. King George III. ascended the throne amidst the greatest successes both by sea and land. At this time, indeed, the efforts of Britain in every quarter of the globe were truly astonishing. The king of Prussia received a subsidy; a large body of English forces commanded the extensive peninsula of India; another army of 20,000 men confirmed their conquests in N. America; 30,000 men were employed in Germany; and many more were dispersed in the different garrisons in different parts of the world; but all this was surpassed by the astonishing naval force, which carried command wherever it came, and had totally annihilated the French maritime power. The courage and conduct of the English admirals excelled every thing that had been heard of before; neither superior force, nor number, nor even the terrors of the tempest, could intimidate them. Admiral Hawke gained a complete victory over an equal number of French ships in QUÉBÉRON BAY on the coast of

of Bretagne, in the midst of a tempest, during the darkness of night, and, what a seaman fears still more, in the neighbourhood of a rocky shore.

(83.) ENGLAND, HISTORY OF, UNTIL THE PACIFICATION TREATY AT PARIS, IN 1763. As soon as his present majesty had met with his parliament, which was on November 18th 1760, he confirmed the hopes of his allies, and gave assurances of his intentions to prosecute the war with vigour. By this time, however, the people were in some measure weary with conquests; especially with those in Germany, from which they could never hope for any solid advantage, and which were gained at an immense expence to the nation. Disputes concerning the propriety of the German war were carried on, and the general run of popular opinion seemed to be rather against than for it. For some time, however, no change took place in the method of carrying on the war. In 1761 proposals of peace were made between the belligerent powers; and for this purpose Mr Stanley was sent to Paris, and Mr Bussy to London: but the French court, designing to draw Spain into a confederacy with them, seemed not to have been sincere in their intentions; and thus the treaty came to nothing. An enterprise was projected against the island of Belleisle, near the coast of France, which was conducted by commodore Keppel and general Hodgson. (See BELLE-ISLE.) The place was conquered, with the loss of 1800 men killed and wounded on the part of the British; and however unimportant this conquest might be, the rejoicings on account of it were great. In Germany, the campaign was unsuccessful on the part of the allies. At first, indeed, they drove the French quite out of the territory of Hesse, and laid siege to the city of Cassel; but being defeated at Stangerod, they were forced to raise the siege, retire behind the Dymel, and again abandon Hesse to their enemies. Here they were followed and attacked by the French; who, though defeated in that attempt, were with difficulty prevented from making themselves masters of Munster and Brunswick. All this time an appearance of negotiation had been carried on; but at last the French having brought their designs with the court of Spain to a bearing, Mr Bussy delivered to Mr Pitt a private memorial, signifying, that, in order to establish the peace on a lasting foundation, the king of Spain might be induced to guaranty the treaty; and to prevent the differences which then subsisted between Britain and Spain from producing a fresh war in Europe, he proposed, that in this negotiation, the three points which had been disputed between the crowns of England and Spain might be finally settled: 1st. the restitution of some captures made upon the Spanish flag: 2dly. the privilege of the Spanish nation to fish upon the banks of Newfoundland: 3dly. the demolition of the English settlements made in the bay of Honduras. This memorial was rejected as wholly inadmissible. Mr Pitt declared, that it would be looked upon as an affront to the dignity of his master, and incompatible with the sincerity of the negotiation, to make any further mention of such a proposal. Mr Pitt being now thoroughly convinced of the

nister designs of Spain, proposed immediately to declare war against that kingdom. But this proposal being rejected, he resigned his employment of secretary of state; after which, he was created earl of Chatham, and had a pension of 3000l. per annum settled upon him for three lives. Soon after this, however, the new administration found that Mr Pitt was in the right, and war was declared between Great Britain and Spain. As Portugal was an useful ally of Britain, it was resolved by the French and Spaniards to attack that kingdom, which was then in no capacity to defend itself. Joseph, the Portuguese monarch, was, in the most haughty memorials, commanded to accede to the confederacy against Britain, and threatened with the vengeance of France in Spain in case of a refusal. In vain he promised to observe a strict neutrality, and urged the obligations he was under to the king of Britain; a moderate and reasonable reply only drew on him haughty and insulting answers. Joseph, however, continued to reject their proposals in the most solute manner; and concluded his last declaration with these words, that "it would affect him but though reduced to the last extremity, of which the great judge is the sole arbiter, to let the title of his palace fall, and to see his faithful subjects spill the last drop of their blood, than to sacrifice, together with the honour of his crown, all that Portugal holds most dear; and to submit by such extraordinary means, to become an example to all pacific powers, who are no longer able to enjoy the benefit of neutrality, whenever a war shall be kindled between their powers, with which the former are connected by defensive treaties." This declaration was made on the 17th April, 1762; and soon after France and Spain jointly declared war against Portugal. As the design of the courts of France and Spain in making war with Portugal, was professedly to prevent Great Britain from the military and commercial use of the ports of that kingdom, their principal endeavours were directed at the two great ports where the British used to reside, viz. Oporto and Lisbon. With this view 3 inroads were to be made; one to the N. and more to the S. while the third was made in the middle provinces, in order to sustain these two bodies, and preserve a communication between them. The first body of troops was commanded by the marquis of Savria; and entered the NE. angle of Portugal, marching towards Miranda. This movement might possibly have retarded their progress, but not a powder magazine been blown up by accident; and the Spaniards entered on the 24th of May by the breaches made by this explosion. From thence they marched to Braganza, which surrendered six days after Miranda. Moncorvo was taken in like manner; every thing was done before them to the banks of the Douro; and they became masters of almost the whole extensive province of Tralos Montes. Oporto was given up for lost, and the admiralty prepared transports to carry off the effects of the British merchants. On the banks of the Douro, however, the career of this body was stopped. The peasants, armed and guided by some British officers, seized a

ult pass, and drove the enemy back to Mon-
 rove. The second body of Spaniards entered
 province of Beira, at the villages called *Val de*
and Val de Coelba. They were joined by
 detachments amounting to almost the whole
 in Tralos Montes; and immediately laid
 to Almeida, the strongest and best provided
 on the frontiers of Portugal. This place was
 ded with sufficient resolution; but was obliged
 render on the 25th of August. The Spa-
 then over-ran the whole territory of Castel
 co, a principal district of Beira, making their
 southward to the banks of the Tagus. Du-
 their whole progress, and indeed during the
 e of the campaign, the allied troops of Great
 in and Portugal had nothing that could be
 an army in the field, whereby they could
 le enemy in a pitched battle. All that
 be done was by the defence of passes, skir-
 es and surprises. By this time the count of
 ppe Bukeburg had arrived in Portugal, to
 xpressible joy of the whole nation. The 3d
 ish army had assembled on the frontiers of
 madura, with a design to invade the province
 Alentejo; and had this body of troops been
 d to the others, they would probably, in spite
 opposition have forced their way to Lisbon.
 it even acted separately, it might have great-
 racted the defendants, so as to enable some
 body of forces to penetrate to that city.
 count, therefore, resolved to prevent their
 mee into the kingdom; and with this view
 uted brigadier general Burgoyne to attack
 vanced body of Spaniards which lay on their
 bers, in a town called *Valentia de Alcantara*.
 the 27th Aug. the town was surpris'd; the
 al was taken who intended to have com-
 d in the invasion, together with one colo-
 two captains, and 17 subaltern officers. One
 be best regiments in the Spanish service was
 entirely destroyed; and thus the enemy were
 probability prevented from entering Alente-
 That part of the Spanish army which acted
 e territory of Castel Branco had made them-
 selves masters of several important passes, which
 obliged some bodies of Portuguese to aban-

The combined army of British and Portu-
 pretended to retire before them, in order
 raw them into the mountainous tracts. They
 ded the rear of the allies, but were repuls'd
 losa. Still, however, they continued masters
 e country, and nothing remained but the pas-
 of the Tagus to enable them to take up their
 ters in the province of Alentejo. This the
 it designed to prevent; and in this service ge-
 l Burgoyne was employed, who formed a de-
 of surping them. The execution was com-
 ed to colonel Lee, who in the night of Oct.
 fell upon their rear, dispersed the whole bo-
 with considerable slaughter, destroyed their
 azines, and returned with scarce any loss.
 season was now far advanced; immense quan-
 of rain fell; the roads were destroyed; and
 Spaniards, having seized no advanced posts,
 re they could maintain themselves, and being
 rovided with magazines for the support of
 r horse, every where fell back to the frontiers
 pain. No less successful were the British arms

in America and the East Indies. From the French
 were taken the islands of Martinico, St Lucia, St
 Vincent and Granada; from the Spaniards the
 strong fortress called *Havannah*, in the island of
 Cuba. By the acquisition of the first mentioned
 islands, the British became the sole and undisturb-
 ed possessors of all the Carribees; and held that
 chain of innumerable islands which forms an im-
 mense bow, extending from the eastern point of
 Hispaniola, almost to the continent of S. Ameri-
 ca. The conquest of the Havannah cost a num-
 ber of brave men; more of whom were destroyed
 by the climate than the enemy. See HAVANNAH.
 It was in this place that the fleets from the sever-
 al parts of the Spanish West Indies, called the
galleons and *flota*, assembled, before they finally
 set out on their voyage for Europe. The acqui-
 sition of this place, therefore, united in itself all
 the advantages which can be acquired in war. It
 was a military advantage of the highest class; it
 was equal to the greatest naval victory, by its ef-
 fect on the enemy's marine; and in the plunder
 it equalled the produce of a national subsidy.
 Nine of the enemy's men of war, with 4 frigates,
 were taken; 3 of their capital ships were sunk
 in the harbour at the beginning of the siege; two
 more on the stocks, in great forwardness, were
 also destroyed. In money and valuable merchan-
 dises, the plunder did not fall short of 3,000,000l.
 sterling. To this success in the western part of
 the world may be added the capture of the Spa-
 nish register ship, called *Hermione*, by the Active
 and Favourite king's ships. This happened on
 the 21st of May 1762, just as she was entering
 one of the ports of Old Spain, and the prize was
 little short of 1,000,000l. sterling. In the East In-
 dies an expedition was undertaken against the
 Philippine islands, which was committed to co-
 lonel Draper, who arrived for this purpose at
 Madras in the end of June 1762. The 79th regi-
 ment was the only regular corps that could be
 spared for this service. Every thing was conduc-
 ted with the greatest celerity and judgment. The
 British forces landed on Manilla on the 24th Sept.;
 on the 6th of Oct. the governor surrendered at
 discretion; and soon after, the galleon bound from
 Manilla to Acapulco, laden with rich merchan-
 dise to the value of more than half a million, was
 taken by two frigates, called the *Argo* and *Pan-
 ther*. By the conquest of Manilla, 14 considerable
 islands fell into the hands of the British; which,
 from their extent, fertility, and convenience of
 commerce, furnished the materials of a great king-
 dom. By this acquisition, joined to our former
 successes, we secured all the avenues of the Spa-
 nish trade, and interrupted all communication
 between the parts of their vast but unconnec-
 ted empire. The conquest of the Havannah had
 cut off in a great measure the intercourse of their
 wealthy continental colonies with Europe; the
 reduction of the Philippines excluded from Asia;
 and the plunder taken was far more than sufficient
 to indemnify the charges of the expedition; a cir-
 cumstance not very common in modern wars. It
 amounted to upwards of a million and a half; of
 which the East India company, on whom the
 charge of the enterprise in a great measure lay,
 were by contract to have a third part. All this

time the war in Germany had continued with the utmost violence; the allies under prince Ferdinand had continued to give the highest proofs of their valour, but no decisive advantage could be obtained against the French. It was, however, no longer the interest of Britain to continue a destructive war. There never had been a period so fortunate or glorious to this island. In the course of this war she had conquered a tract of continent of immense extent. Her American territory approached to the borders of Asia, and came near to the frontiers of the Russian and Chinese dominions. She had conquered 25 islands, all distinguishable for their magnitude, their richness, or the importance of their situation. By sea and land she had gained 12 battles, had reduced 9 fortified cities, and near 40 castles and forts. She had taken or destroyed above 100 ships of war from her enemies, and acquired at least £10,000,000 in plunder. By such unexampled and wide extended conquests, it is no wonder that the French and Spaniards were desirous of a peace; which was at length concluded at Paris on the 10th Feb. 1763. The terms granted them were by many thought too favourable. The principal were, That the French king should relinquish all claims to Nova Scotia; that he should likewise give up all Canada; and that for the future, the boundary betwixt the British and French dominions in America should be fixed, by a line drawn along the middle of the river Mississippi, from its source to the river Ibberville; and from thence by a line along the middle of this river, and the lakes Maurepas and Pontchartrain, to the sea. The islands of St Pierre, Miquelon, Martinico, Guadaloupe, Marigalante, Desirade, St Lucia, and Belleisle, were restored to France: Minorca, Granada, and the Grenadines, St Vincent, Dominica, and Tobago, were ceded to Britain. In Africa, the island of Goree was restored to France; and the river Senegal, with all its forts and dependencies ceded to Great Britain. In the East Indies, all the forts and factories taken from the French were restored. In Europe the fortifications of Dunkirk were to be destroyed; and all the countries fortresses, &c. belonging to the elector of Hanover, the duke of Brunswick, and the count of La Lippe Buckeburg, restored. With regard to Spain, the British fortifications on the Bay of Honduras were to be demolished; and the Spaniards were to desist from their claim of a right to fish on the Newfoundland bank. The Havannah was restored; in consequence of which, Florida, St Augustine, and the bay of Pensacola, were ceded to Britain, and the Spaniards were to make peace with Portugal; and all other countries not particularly mentioned were to be restored to their respective owners at the beginning of the war.

(84.) ENGLAND, HISTORY OF, UNTIL THE PARTY SPIRIT AND POPULAR FERMENT EXCITED ABOUT GENERAL WARRANTS. The conclusion of the war did not by any means tend to heal those divisions, which had arisen on the resignation of Mr Pitt; on the contrary, it furnished abundant matter of complaint for the discontented party. At the time the treaty was under consideration, however, only some faint attempts were made to oppose it; but it soon appeared,

that though this opposition had proved so feeble the spirit of the party was far from being extinguished. The state of affairs at that time indeed greatly favoured the views of those who opposed the ministry. A long and expensive war had drained the national treasure, and greatly increased the public debt. Heavy taxes had already been imposed, and it was still as necessary to keep these, and even to impose new ones, as if the war had not ceased. Thus the bulk of the nation who imagined that conquest and riches were to go hand in hand, were easily induced to believe that administration arbitrary and oppressive, who continued to load them with fresh taxes, after great successes as had attended the British arms for some years past. It must be owned, that the new administration were not sufficiently wary in this respect. Among other methods of raising the supplies for 1763, they had thought proper to lay a duty of 4s. per hoghead upon cyder payable by the maker, and to be collected in the same manner as other excises. The other method of supply furnished also matter of declamation to the members in opposition; but this inflamed popular fury to a great degree, and made the readily imbibe as truth whatever was thrown out by the minority in their parliamentary debates. Besides the usual declamations, that it was oppressive, unconstitutional, and injurious to the land-holder and farmer, the smallness of the tax to be raised by it was now urged. This was intended to indicate, that the supplying the wants of government could not be the sole motive for imposing such a duty. It was farther urged, we much show of lamentation, that now the heads of all orders of people, noblemen of the first rank not excepted, were liable to be entered and taxed at the pleasure of excisemen, a proceeding which they denominated in express terms "a badge of slavery." Thus it was spoken of throughout all the cyder counties, by the city of London, and by most of the corporations throughout the kingdom. The city had been displeased by the late changes in administration, and had not yet recovered their good humour. They instructed their representatives to oppose the passage of the bill with all possible vigour, and gave propositions against it to every branch of the legislature a measure till that time totally unprecedented. Two protests were also entered against it in the house of lords; and in short the kingdom of England was thrown into an almost universal ferment. It is not to be doubted, that the friends of administration were able to bring arguments sufficiently plausible in favour of their scheme; but the utmost force of reason will go a very little way in quieting popular clamour; and while opposition was railing against ministry within doors, a very method was taken to excite the fury of the people without. Virulent libels, the audacity of which, far exceeded any thing known in former times, now made their appearance: and such was the general intemperance in this respect, that it would be difficult to determine which side paid least regard to any kind of decency or decorum. In the midst of this general ferment, the earl of Bute unexpectedly resigned his place of first lord of the treasury. His resignation quickly became

a object of general animadversion; by some he as highly censured for leaving his friends at the me when a little perseverance might have defeated all the designs of his enemies, and established his power on the most solid foundation. Such conduct, they said, must discourage the friends of government, and give proportionable encouragement to its adversaries to insult it; as they perceived ministry unable to resist the first gust of popular fury. Others contended, that the earl was, perhaps, the least influenced by popular opinion any man in the world. He had demonstrated his talents by taking a lead in the dangerous but necessary affair of concluding peace; and, this being accomplished, he had fully obtained his end, and performed the service to his country which is desired. He now resolved that the factious party should not have even the pretence of obtruding his personal ambition as the cause of disturbances which they themselves had excited; and thus his resignation would tend to put an end to these troubles, at the same time that it owed the authors of them in their proper colours. The event, however, showed that the former reasoning was, in the present case, nearest the truth. The popular resentment was not in the least abated by lord Bute's resignation. His lordship, though now withdrawn from the ostensible administration of affairs, was still considered as principal director of the cabinet; and this opinion increased the more ground, that none of the popular leaders were yet taken in, nor any apparent change made in the conduct of the new administration. No reasonable objection, however, could now be made to those who filled the great offices of state. Mr Grenville, who succeeded the earl Bute in the treasury, was a man of approved integrity, understanding, and experience. Lord Bland was universally considered as a very able man in office, and had filled many high employments with great reputation. The other secretary, lord Egremont, though he had not so long in office, was in every respect of an exceptionable character. The other departments were filled in a similar manner, yet the dissenters and public clamours were not diminished.

It was now said, that the new ministers were chosen on account of any superior gifts of nature or fortune, but merely because they had the art of insinuating themselves into favour at court, in such a manner that any inconvenience would be omitted to, rather than part with them. The reason of their appointment therefore was, that they might act as the passive instruments of the late minister, who, though he had thought proper to retire from business, yet had not abandoned his ambitious projects, but continued to direct every thing as if he had still been present. Opposition to the new ministers was therefore opposition to him; and it became those who understood the true interest of their country, and had regard for it, not to suffer such a scheme of defective administration. Whether the party who made these assertions really believed them or cannot be known; but the effect was exactly the same. The great object of both parties most probably was power; but their different situations

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required that they should profess different political principles. The friends of lord Bute and of the succeeding administration were for preserving to the crown the full exercise of a power which could not be disputed, viz. that of choosing its own servants. Their opponents, without denying this power, contended, that, according to the spirit of the constitution, the crown should be directed to the exercise of this public duty only by motives of national utility, and not by private friendship. In appointing the officers of state, therefore, they insisted, that respect should be paid to those possessed of great talents, who had done eminent services to the nation, enjoyed the confidence of the nobility, and had influence among the landed and mercantile interests. The observance of this rule, they contended, was the only proper balance which could be had against the enormous influence of the crown, arising from the disposal of so many places; nor could the nation be reconciled to this power by any other means than a very popular use of it. Men might indeed be appointed according to the strict letter of the law; but unless these were men in whom the majority of the nation already put confidence, they never would be satisfied, nor think themselves secure against attempts on the constitution. When ministers also found themselves recommended to the royal favour, and as it were presented to their places by the esteem of the people, they would be studious to deserve and secure themselves in it; and upon these (which they called the principles of whigs) they said that the government had been honourably conducted since the revolution, and the nation would never be at peace till they were again established on the same basis. In the mean time the disposition to libel and invective seemed to have gone beyond all bounds. The peace, the Scots, and Scottified administration, afforded such subjects of abuse to the patriots, real and pretended, that ministry resolved at last to make an example of one of them by way of deterring the rest from such licentiousness. For this purpose the paper called the *North Briton* was made choice of, which, in language much superior to any other political work of the time, except *Junius's Letters*, (which are still esteemed a standard of elegant diction,) had abused the king, the ministry, and the Scots in an extravagant manner. One particular paper, N^o XLV, was deemed by those in power to be actionable, and John Wilkes, Esq. M. P. for Aylesbury, was supposed to be the author. A warrant was therefore granted for apprehending the author, publishers, &c. of this performance, but without mentioning Wilkes's name. Accordingly, three messengers entered his house on the night between the 29th and 30th of April, 1763, with an intention to seize him. He objected, however, to the legality of the warrant, because his name was not mentioned in it, and likewise to the lateness of the hour; and on threatening the messengers with violence, they thought proper to retire for that night. Next morning he was apprehended without making any resistance, though some violence was necessary to get him into an hackney coach, which carried him before the secretaries of state for examination. On

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the first intimation of Mr WILKES being in custody, application was made for an *habeas corpus*; but as this could not be sued out till 4 P.M. several of his friends desired admittance to him, which was peremptorily refused, on pretence of an order from the secretaries of state. This order, however, though repeatedly demanded, could not be produced, or at least was not so; on which account the gentlemen, conceiving that they were not obliged to pay any regard to messengers acting only by a verbal commission, entered the place where he was without farther question. This illegal step was quickly followed by several others. Mr Wilkes's house was searched, and his papers seized in his absence; and though it was certain, that an *habeas corpus* was now obtained, he was nevertheless committed to the Tower. Here not only his friends, but several noblemen and gentlemen of the first distinction, were denied access; nor was even his own brother allowed to see him. On the 3d of May he was brought before the court of Common Pleas, where he made a most patriotic speech, setting forth the love he had for his majesty, the bad conduct of ministry, with his own particular grievances; and that he had been treated "worse than a Scotch rebel." His case being learnedly argued by several eminent lawyers, he was remanded to the Tower for three days; after which he was ordered to be brought up, that the affair might be finally settled. Next day lord Temple received a letter from secretary Egremont, informing him, that the king judged it improper, that Mr Wilkes should continue any longer a colonel of the Buckinghamshire militia; and, soon after, Temple himself was removed from being lord lieutenant of that county. Mr Wilkes then being brought to Westminster hall at the time appointed, made another flaming speech; after which the judges took his case into consideration. Their opinion was, that the warrant of a secretary of state was in no respect superior to that of a common justice of peace; and, on the whole, that Mr Wilkes's commitment was illegal. It was likewise determined, that his privilege as member of parliament was infringed: that this could not be forfeited but by treason, felony, or breach of the peace; none of which was imputed to him; for a libel, even if it had been proved, had only a tendency to disturb the peace, without any actual breach of it. Thus it was resolved to discharge him; but, before he quitted the court, a gentleman of eminence in the profession of the law stood up and acquainted the judges, that he had just received a note from the attorney and solicitor general, intreating his lordship not to give Mr Wilkes leave to depart till they came, which would be instantly, as they had something to offer against his plea of privilege. This motion, however, being rejected, the prisoner was set at liberty. Mr Wilkes had no sooner regained his freedom than he resolved to take all the advantage he could, of the errors committed by the ministry, and to excite as general a ferment as possible. For this purpose he wrote a very impudent letter to the earls of Egremont and Halifax, informing them, that his house had been robbed, and that the *stolen goods* were in the possession of one or both of their lordships, insinuating upon immediate restitution.

This letter was printed, and many thousand copies of it dispersed; soon after which an answer by the two earls was published in the newspapers, in which they informed him of the true cause of the seizure of his papers, that his majesty had ordered him to be prosecuted by the attorney general, and that such of his papers as did not lead to a proof of his guilt should be restored. This was quickly succeeded by a reply, but the correspondence ceased on the part of their lordships. Mr Wilkes, however, erected a printing press in his own house, where he advertised the proceedings of the administration, with all the original papers, at the price of a guinea. The *North Briton* now again made its appearance; the popular party were elated beyond measure with their success; those who had suffered by general warrants sought redress at law, and commonly obtained damages far beyond not only their real sufferings, but even beyond their most sanguine expectations. During the whole summer, the minds of the people were kept in continual agitation by political pamphlets and libels of various kinds, while the affair of general warrants so engrossed the public attention, that by the time the parliament sat down, Nov. 15, 1763, scarce any other subject of conversation could be started in company.

(85.) ENGLAND, HISTORY OF, UNTIL THE PASSING OF THE STAMP ACT. His majesty, on the meeting of parliament, mentioned in his speech the attempts that had been made to divide the people; and before the addresses could be made in return, a message was sent to the commons, informing them of the supposed offence of Mr Wilkes, and of the proceedings against him; the exceptionable paper being also laid before the house. After warm debates, the *North Briton* was declared to be a false, scandalous, and seditious libel, tending to excite traitorous insurrections, &c. This was followed by another declaration, that the privilege of parliament does not extend to the writing and publishing of seditious libels, nor ought to obstruct the ordinary course of the law in the speedy and effectual prosecution of so heinous and dangerous an offence. This did not, however, pass the house of commons without a vigorous opposition, and 17 members of the upper house protested against it. The *North Briton*, N^o XLV, being thus condemned, was ordered to be burnt by the hangman; but this could not be done without great opposition from the mob. The executioner, constables, officers, and even the chief persons concerned, were pelted with dirt and stones, and some of them insulted in the grossest manner. Mr Harley, one of the sheriffs, and member of parliament for London, was wounded by a billet taken from the fire; the staves of the constables were broken; and the whole officers and executioner driven off the field, while the remains of the paper were carried off in triumph from the flames, and in return, a large jack boot was burnt at Temple-bar, while the half burnt *North Briton* was displayed amidst the acclamations of the populace. Mr Wilkes, in the mean time, determined to make the best use of the victory he had already gained, and therefore commenced a prosecution in the court of common pleas against Robert Wood, Esq. the under secretary of state, for *seizing*

sizing his papers. The cause was determined in his favour, and Wood condemned in 1000*l.* damages, with full costs of suit. The prosecution, with which Mr Wilkes had been threatened, was now carried on with great vigour; but in the mean time, having grossly affronted Samuel Mar- ton, Esq. member for Camelford, by his abusive language in the North Briton, he was by that gentleman challenged, and dangerously wounded in the belly with a pistol bullet.—While he lay ill of his wound, the house of commons put off his trial from time to time; but beginning at last to suspect that there was some collusion betwixt him and his physician, they enjoined Dr Heberden, and Mr Hawkins an eminent surgeon, to attend him, and report safe. Mr Wilkes, however, did not think proper to admit a visit from these gentlemen; but soon after took a journey to France to visit his daughter, who, as he gave out, lay dangerously ill at Paris. The commons having now lost all patience, and being certified that he had refused to admit a physician and surgeon sent by them, proceeded against him in his absence. The evidence appearing quite satisfactory, he was expelled the house, and a prosecution afterwards commenced against him before the house of lords, on account of an obscene and blasphemous pamphlet, in which he had mentioned a reverend and learned bishop in a most shameful manner. The event of all was, at last, failing to appear to answer the charges against him, he was outlawed, which, it was then proposed, would for ever consign his patriotism to oblivion. The extreme severity shown to Mr Wilkes did not at all extinguish the spirit of the party. A general insatiation in favour of licentious and abusive writings seemed to have taken place; and to publish libels of this kind, without regard to truth or justice, was called *liberty*. At the very time that Mr Wilkes was found guilty of publishing the infamous pamphlet above mentioned, the common council of London presented their thanks to the city representatives, for their zealous and spirited endeavours to assert the rights and liberties of the subject, “by their laudable attempt to obtain a seasonable and parliamentary declaration, That a general warrant for apprehending and seizing the authors, printers, and publishers of a seditious libel, together with their papers, is not warranted by law.” Their gratitude they showed to lord chief justice Pratt, for his decision in Wilkes’s affair, by presenting him with the freedom of the city, and desiring him to sit for his picture to be placed in Guildhall. These proceedings, however, did not pass without strong opposition, and were considered by the moderate party as highly unjust and improper, as well as innocent. The violent clamours, which had been excited and still continued, though in a less violent degree, did not prevent administration from paying that attention to the exigencies of the nation, which its situation required. The practice of franking blank covers to go free per post to any part of Great Britain or Ireland, had arisen to an incredible height, and greatly prejudiced the revenue. See FRANKED LETTERS. The following act was passed as an effectual remedy, viz. That from the 1st of May 1764, no letters or packets should be exempted from postage, except such as

were sent to or from the king; or such as, not exceeding two ounces in weight, should be signed by a member of either house, the whole of the superscription being in his own hand writing; or such as should be directed to members of parliament, or other persons specified in the act. It was likewise enacted, that printed votes and proceedings in parliament, sent without covers, or in covers open at the sides, and only signed on the outside by a member, should go free; though such packets were liable to be searched; and to give the greater force to these regulations, it was made felony and transportation for 7 years to forge a frank. Other plans for augmenting the revenue were that for settling the island of St John, and for the sale of the lately acquired American islands. The former was proposed by the earl of Egremont, who presented a memorial to his majesty, desiring a grant of the whole island, to hold the same in fee of the crown for ever; specifying the various divisions, government, &c. but, for reasons unknown, the plan was never put in execution. The sale of the conquered lands took place in March 1764. These were the islands of Grenada, the Grenadines, Dominica, St Vincent, and Tobago. Sixpence an acre was to be paid as a quit rent for cleared lands; a penny a foot for ground rent of tenements in towns; and 6*d.* an acre for fields; but no person was to purchase more than 300 acres in Dominica, or 500 in the other islands. One of the most remarkable transactions of this year was the renewal of the charter of the bank, for which the latter paid the sum of 1,100,000*l.* into the exchequer as a present to the public; besides advancing a million to government upon exchequer bills. Another, and, by its consequences, still more momentous affair, however, was the consideration of methods to raise a revenue upon the American colonies. This had been formerly proposed to Sir Robert Walpole; but that prudent minister wisely declined to enter into such a dangerous affair, saying, that he would leave the taxation of the colonies to those who came after him. The reason given for this proceeding was to defray the necessary charges of defending them; which though extremely reasonable in itself, was attempted to be done in such a manner, as excited a flame that was not extinguished, but by a total loss of the authority of the parent state. Before this time, indeed, hints had been thrown out, that it was not impossible for the colonists to withdraw their dependence on Britain; and some disputes had taken place betwixt the different provinces, which were quieted only by the fear of the French, and seemed to prognosticate no good. It was thought proper therefore now, when the colonies were not only secured but extended, to make the experiment whether they would be obedient or not. They contained more than two millions of people, and it was reckoned by ministry both just and necessary to raise a revenue from such a numerous body. Some thought it might be dangerous to provoke them; but to this it was replied by administration, that the danger must increase by forbearance; and as taxation was indispensable, the sooner the experiment was made the better. The fatal trial being thus resolved upon, an act was passed for prevent-

ing smuggling, so that the duties laid on the American trade might come into the hands of government. At this time an illicit trade was carried on betwixt the British and Spanish colonies, which seemed to bid defiance to all law and regulation; and was no less disagreeable to the Spanish than to the British court. In some respects, however, the suppression of this was very inconvenient, and even intolerable to the colonists; for as the balance of trade with Britain was against them, it was impossible they could procure any specie, except by trading with the Spaniards, from whom they were paid for their goods in gold and silver. This, and another act requiring them to pay certain duties in cash, was probably the reason of that excessive resentment shown by the Americans to government, and their absolute refusal to submit to the stamp act, which was also passed this year.

(86.) ENGLAND, HISTORY OF, UNTIL THE REPEAL OF THE STAMP ACT. The increase of the revenue being a chief object of administration at this time, the suppression of smuggling at home, as well as in America, was taken into consideration. Though the great number of cutters and other vessels fitted out by government for this purpose had produced very salutary effects, the *isle of Man*, which belonged to the duke of Athol, and was not subject to the custom-house laws, lay so conveniently for the purposes of smuggling, that the utmost vigilance of government was not sufficient to suppress it. The event was a treaty betwixt government and the duke, by which the latter, for a sum of money, ceded all the sovereignty in the island he could claim, and cutters were placed on the coasts and in the harbours of the island as in other places of the kingdom. This disposition to augment the revenue by all possible methods, seems to have served to keep up the general opinion of the oppressive and arbitrary measures about to be pursued by government. The opposition of the British patriots still continued; and the stamp bills were received in America with the utmost indignation. (See AMERICA, § 12.) The opposition of the colonists proved very distressing to the mother country, on account of the vast sums they owed. At this time they were indebted to the merchants of London four millions Sterling; and so ready were the latter to give them credit, that some of the American legislatures passed acts against incurring such credit for the future. A petition on the subject was presented to the house of commons; but as it denied the parliamentary right of taxation, it was not allowed to be read. It was then proposed, on the part of administration, that the agents should join in a petition to the house for their being heard by counsel in behalf of their respective colonies against the tax. The agents, however, not thinking themselves empowered to present such a petition, the negotiation was broken off, and matters went on in America as we have related under that article. See AMERICA, § 12—14. In other respects, the ministry took such steps as were proper for supporting the honour of the nation. Some encroachments having been made by the French and Spaniards, such remonstrances were made to their respective courts, that satisfaction was quickly

made. The disposition to tumult and insurrection, however, seems to have been now very rare. The silk-weavers residing in Spitalfields being distressed for want of employment, which they supposed to proceed from the clandestine importation of French silks, laid their case before his majesty in 1764, who graciously promised them relief. The sufferers were relieved by the bounty of the public; but this seemed to render the matter worse, by confirming them in habits of idleness and idleness. At the same time, a riot which was supposed to tend to their relief, being thrown out, they began to assemble in vast numbers, which, gradually increasing, are said to have amounted at last to 50,000; several disorders were committed, and it was not without the assistance of the soldiery, and the utmost vigilance of the magistrates, that the riot could be suppressed. During this insurrection, the ferment betwixt the court and popular parties continued with unabated vigour. The ministers were still attacked in numberless publications, and accused as being merely dependents on the earl of Bute. An accident, however, now produced a considerable revolution at court, though it had very little effect in calming the minds of the people. This was an illness with which the king was seized in the beginning of the year, which filled the public with apprehensions, and produced a bill for settling the affairs of the kingdom, in case of the crown falling into the hands of a minor. In settling this bill, ministers were said to have behaved with very little respect to the prince's daughter of Wales, and industriously to have excluded her from a share of the government. These proceedings were thought in a great measure to have alienated the affection of his majesty from the ministry, who had hitherto been in great favour: Nor did their subsequent conduct show them to be at all desirous of regaining what they had lost. They now contrived to have the earl of Bute's brother turned out of a very lucrative post which he enjoyed in Scotland, and in which he had never given the least cause of complaint. A step of this kind could not be agreeable to the king, nor could it recommend them to the popular party in England, who always manifested a perfect indifference as to what passed in Scotland. On this occasion lord Chatham is said to have been solicited again to accept the office which he had formerly held so much to the satisfaction of the nation, and to have declined it. A new ministry, however, was soon formed, at the recommendation of the duke of Cumberland. The duke of Grafton and the hon. Mr Conway, brother to the earl of Hertford, were appointed secretaries of state, the marquis of Rockingham first lord of the exchequer, and Mr Dowdeswell chancellor and under treasurer of the exchequer. The office of lord privy seal was conferred on the duke of Newcastle, and all other places were filled with men not only of known integrity, but high popularity. Yet even these changes were not able to give satisfaction. The opinion that affairs were still managed by the earl of Bute continued to prevail, and was industriously kept up by the political writers of the time. The magistrates of London expressed their discontent on occasion of addressing his majesty

the birth of a third son. They now took the opportunity of assuring him of "their faithful attachment to his royal house; and the true honour of the crown, whenever a happy establishment of public affairs should present a favourable occasion; that they would be ready to exert their abilities in support of such wise councils, as recently tended to render his majesty's reign happy and glorious." These expressions showed an evident disapprobation of his majesty's measures, that it could not fail to offend both king and ministry; but before the latter could show tokens of repentment, they lost their great patron the duke of Cumberland, who died on the 10th of Oct. 1765. He had been that evening sitting at one of those councils frequently held in order to put matters in a way of being more easily dispatched by the privy council; where he was seized with a sudden disorder, of which he died almost instantaneously. His death was much lamented, as he was universally esteemed not only as a brave commander, but an excellent member of society, an encourager of industry, an active promoter of the arts of peace; the stain upon his character being his want of mercy after the victory at Culloden. (See § 10.)

In the mean time, the discontents, which had been kindled in the American colonies, continued to agitate the minds of the people of Great Britain. It was indeed not reasonable to expect that they could be satisfied in their present condition; commerce being almost entirely destroyed, manufactures at a stand, and provisions extravagantly dear. The vast sums owing to the British merchants by the Americans also, severely affected the trade and manufacturing part of the country. The colonies, amounting to several millions, had absolutely refused to pay, until the obnoxious laws should be repealed. Administration therefore under the necessity of either enforcing the stamp act by fire and sword, or procuring its immediate repeal in parliament. The duke of Cumberland was now selected, as he had been accustomed to assist administration with his advice, and was highly respected by the nation for his good sense. At this time, however, it is doubtful if human wisdom could have prevented the consequences which ensued.

Administration endeavoured to avoid the extremes, of rushing into a civil war, on the one hand, and of sacrificing the dignity of the British nation on the other. They suspended their opinion until they should receive certain intelligence from the American governors how affected in that country; and their letters on the occasion still do them honour. The opposite animadverted severely on this conduct. They insisted on having the most coercive methods immediately put in execution for enforcing the laws which they themselves had had so great a share in making. It is probable that they wished matters to come to extremities before the sitting down of parliament. Pacific measures, however, at this time prevailed: the stamp act was repealed; but at the same time another was made, declaring the

right of parliament not only to tax the colonies, but to bind them in all cases whatsoever.

(87.) ENGLAND, HISTORY OF, UNTIL THE SETTLEMENT OF THE DISPUTE WITH SPAIN ABOUT THE FALKLAND ISLANDS. The repeal of the stamp act occasioned universal joy both in Britain and America, though, as parliament insisted upon their right of taxation, which the opposite party denied, matters were still as far from any real accommodation as ever. This ill humour of the Americans was soon after augmented by the duties laid upon glass, painters colours, and tea, imported into their country, while at home the dearth of provisions, and some improper steps taken by ministry to remedy the evil, kept up the outcry against them. A general disposition to tumult and riot still continued; the civil power now seemed to lose its force, and anarchy, under the name of liberty, to be approaching. In this state of affairs, administration were once more disturbed by the appearance of Mr Wilkes, who had returned from his exile, and on the dissolution of parliament in 1768, though an outlaw, stood candidate for the city of London. He was received by the populace with loud acclamations; several merchants and people of large property espoused his cause; and a subscription was entered into for the payment of his debts. He failed, however, in his design of representing the city of London, but instantly declared himself a candidate for Middlesex. The tumults and riots which now took place were innumerable; and such was the animosity betwixt the two parties, that a civil war seemed to be threatened. Our limits do not allow of a particular detail of these transactions. It will be sufficient to notice, that, on a legal trial, the outlawry of Mr Wilkes was reversed, and he was condemned for his offences to pay a fine of £.1000, and to be imprisoned for 12 months. Being idolized by the people, however, and powerfully supported, he was repeatedly chosen member for Middlesex, and as often rejected by the house of commons. The tumults on this occasion were not always ended without bloodshed; and the interposition of the military was construed by the patriots, as an indication of a design to establish ministerial authority, by the most barbarous methods. In short, the behaviour of the people of England and America was at this time so very much alike, that both seemed to be actuated by one spirit, and the conduct of the English patriots undoubtedly contributed to confirm the colonists in their disobedience. Yet, what disinterested person, who considers the principles of the British constitution, as established and avowed at the revolution, can blame them? The dissensions which had so long prevailed in the kingdom did not pass unnoticed by the other European powers, particularly the French and Spaniards. Both had applied themselves with assiduity to the increase of their marine; and many began to prognosticate an attack from one or other, or both of these nations. The Spaniards first showed an inclination to come to a rupture with Britain. The subject in dispute was a settlement formed on Falkland islands, near the southern extremity of the American continent. See

FALK-

FALKLAND ISLANDS. A scheme of this kind had been thought of as early as the reign of Charles II. but it was not till after lord Anson's voyage, that much attention had been paid to it. In the printed account of it, his lordship showed the danger incurred by our navigators through the treachery of the Portuguese in Brasil; and that it was a matter of the greatest importance to discover some place more to the southward, where ships might be supplied with necessaries for their voyage round Cape Horn; and, among others, he pointed out Falkland islands as eligible for this purpose. When at the head of the admiralty, he also forwarded the scheme as much as possible; and some preparations were made for putting it in execution: but as it met with opposition at home, and gave offence to the court of Madrid, it was laid aside till 1764, when it was revived by lord Egmont. Commodore Byron being then sent out with proper necessaries, took possession of them in the name of his majesty, and represented them in a favourable light; while his successor, captain M'Bride, affirmed, that the soil was utterly incapable of cultivation, and the climate intolerable. Be this as it may, the islands in question had attracted also the notice of the French. So low, however, had the French finances been reduced by the late war, that no project of the kind could yet be put in execution at the public expence. M. Bougainville, therefore, with the assistance of his friends, undertook to form a settlement on Falkland islands at their own risk. The scheme was put in execution at the beginning of 1764; and a settlement formed on the E. part of the same island, where commodore Byron had established an English colony on the W. side. His account of the country was still more favourable than that of the English commander; but as the project had been undertaken with a view to other discoveries and advantages, which probably did not turn out according to expectation, the French adventurers soon became weary of their new colony; to which also the displeasure of the Spaniards, who were greatly offended, not a little contributed. M. Bougainville, therefore, being reimbursed in his expences, and the French having given up every claim of discovery or right of possession, the Spaniards landed some troops in 1766, took possession of the fort built by the French, and changed the name of the harbour from *Port Louis* to *Port Solidad*. In 1769, captain Hunt of the Tamar frigate, happening to be on a cruise off Falkland islands, fell in with a Spanish schooner which had been at Port Solidad. During all this time, it is uncertain whether the British and Spanish settlers knew of one another or not. From the behaviour of captain Hunt we should suppose that they did not; as he charged the commander of the schooner to depart from that coast, being the property of his Britannic majesty. The schooner, however, soon returned, bringing an officer from the governor of Buenos Ayres, who gave the like warning to captain Hunt to depart from the coast, as belonging to the king of Spain. Some altercation ensued; but captain Hunt, not choosing to carry matters to extremities, set sail for England, where he arrived in June 1770. At the departure of captain

Hunt, two frigates were left at Falkland islands. One of these was lost in a short time after; and on the 4th June 1770, a Spanish frigate arrived the English settlement named *Port Egmont* with a number of guns and other warlike arms for carrying on a regular siege. In 3 days, 4 other frigates arrived, laden in the same manner so that the English commander, captain Farmer, finding all resistance vain, was obliged to capitulate. The English were ordered to depart within a limited time, carrying with them what they could; and the Spanish commander declared himself answerable for what they should leave on the island. The rudder was taken off the captain Farmer's ship, and kept on shore till the appointed period; after which the frigate was permitted to depart, and in 70 days arrived at Portsmouth. An insult to the British flag, so audacious, seemed to render war inevitable, unless a proper reparation was very speedily made. It was accordingly mentioned in the speech from the throne, Nov. 13th 1770; and immediate satisfaction for the injury was promised to be demanded; and that the necessary preparations for war which had been begun, should not be discontinued. The affairs of America were also taken notice of, where grounds of complaint still existed, notwithstanding the cessation of those commotions which had distressed the commerce of Britain. These promises, with regard to the affairs of Falkland islands, however, were far from giving general satisfaction. The speech, as a work of ministry, was most violently attacked; opposition; and an address in answer to it, as was said, would be an eulogium on ministers who did not deserve it. News had arrived, they said, that Falkland islands in June, which sufficiently demonstrated the designs of Spain; and Gibraltar and Minorca were left open to the attacks of the power, without any preparation being made on our part to resist them. The whole conduct of the ministry was said to be pusillanimous; and a love of peace, which was given out as the result of their unwillingness to resent the injury, was treated with contempt. A motion was now made in both houses for an inquiry into the conduct of the Spaniards on this occasion, and that all papers and letters relative to it should be laid before parliament. The demand, however, was opposed by ministry, who insisted that the line of negotiation precluded the idea of exposing letters or papers sent in confidence while the negotiation was depending; and they asserted that the king of Spain had disavowed the conduct of his officer, and promised satisfaction. It was then alleged, they alleged, to proceed to extremities, when perhaps the officer only was to be blamed; but if, after remonstrance, the king of Spain refused satisfaction, we were then assisted to force that justice which was refused in an amicable manner. Some time before this, Mr. Harris, the English minister at Madrid, dispatched a letter to lord Weymouth, informing him, that a ship had arrived from Buenos Ayres with account of the intended expedition against Port Egmont, the number of men to be employed, and the time fixed for its departure; at the same time it was asserted by prince Maserano, the Spanish ambassador,

ambassador, that he had every reason to believe, the governor of Buenos Ayres had employed at Port Egmont without any orders; and that, by disavowing this proceeding, he might prevent any misunderstanding betwixt the two kingdoms. To this his lordship replied in a friendly manner, asking, among other things, whether the prince had any orders to disavow the proceedings of the governor? And, on his reply being negative, a formal disavowal was demanded.

After some time, his lordship was informed the prince had orders to disavow any particular orders given to Mr Bucarelli, the governor of Buenos Ayres, and at the same time to say, he had acted agreeably to his general instructions and oath as governor; that the island should be restored; and that it was expected the king of Spain would, on his part, disavow the conduct of Captain Hunt, whose menace had induced the governor to act as he did. This reply did not appear agreeable; and soon after the court of Spain became so suspicious, that Mr Harris was ordered to leave the court of Madrid; and the correspondence between prince Maserano and the court of Spain was no longer continued. About this time Lord Weymouth resigned his office, and was succeeded by the earl of Rochford; and the affair of the Falkland islands was no longer openly spoken of. On the sitting down of the parliament, Jan. 1771, however, it was again brought before the house, and the declaration of the Spanish ambassador, with Rochford's acceptance, were announced. Prince Maserano then disavowed, in the name of his master, the violence used at Port Egmont; to the restitution of which he agreed, and hoped that this restitution would be looked upon as an ample satisfaction, and at the same time as not affecting the question concerning the sovereignty of the islands. This produced a demand for copies of all papers, letters, and declarations of every kind relative to Falkland islands; but though it was now seemingly complied with, the opposite party affirmed that it was only in part; for besides a chasm of near six months, during which time there was no account whatever, none of the copies of the claims, made by the court of Spain since the first settlement of the islands, were given up. Thus a suspension was produced, that the concealment of papers, and the deficiencies in the order of the dates, might proceed from some misconduct during the periods in question; and which admission was willing to conceal from the world. To these objections it was replied, that every objection which could be found in the several offices had been presented; and that if there had been any correspondence between the two courts, of which no notice was taken in them, it must have been verbal; but, at any rate, there were papers sufficient to enable the house to determine the propriety or impropriety of their conduct throughout the whole transaction; for every thing decisive or material was in writing, and every writing was produced before them. All these excuses, however, did not yet satisfy opposition. It was reported and generally believed, that France had intervened in the affair; in consequence of which, a resolution was made to address his majesty for in-

formation whether any such interference had taken place, and of what nature it was, or in what manner it had been conducted. The minister denied that there had been any such interference; but it was insisted that this was insufficient; that the word of the king was requisite, as that of the minister could not be satisfactory, even supposing him to be upright. It did not, however, appear that any correspondence in writing had taken place betwixt the two courts; and when the minister was asked, whether France had ever interposed as mediator? he answered, that England had not employed France in that capacity; but that the word *interposed* was of a meaning too vague for a direct explanation; and it was unusual to demand verbal negotiations, while papers were laid before them: That as all Europe had an eye to the compromising of differences betwixt states, it was not to be supposed that France would be altogether silent; but nothing (says he) dishonourable has ever passed." Opposition still insisted that they had a right to have an account of verbal negotiations as well as others; and that if this right was given up, a minister had no more to do, when he wished to promote an insidious measure, than to conduct it by verbal correspondence. The motion, however, was lost by a great majority in both houses. This manner of deciding the question was so far from allaying the general ferment, that it rendered it much worse. The transaction was considered as entirely disgraceful to the British nation; nor were all the arguments that could be used by the ministerial party in any degree sufficient to overthrow the general opinion. The restitution of the island was thought to be an inadequate recompense for the affront that had been offered; and the objections to it were urged on a motion for an address to return thanks for the communication of the Spanish declaration, and to testify their satisfaction with the redress that had been obtained. This address was not carried without considerable difficulty, and produced a protest from 19 peers. On the part of Spain, however, every part of the agreement was ostensibly fulfilled; Port Egmont was restored, and the British once more took possession of it, though it was in a short time after evacuated, according to a *private* agreement, as was suspected, between ministry and the court of Spain; though of this no certain evidence ever appeared.

(88.)—ENGLAND, HISTORY OF, UNTIL THE SETTLEMENT OF THE MISUNDERSTANDING BETWEEN THE TWO HOUSES OF PARLIAMENT. Great discontents prevailed at this time throughout the kingdom. A fire which happened at Portsmouth in 1770 excited numberless jealousies, and was by some imputed to our enemies on the continent. The affair of the Middlesex election was never forgot; and notwithstanding repeated repulses, the city of London still presented new petitions to the throne. In one presented by Mr Beckford, the lord mayor, they lamented the heavy displeasure under which they seemed to have fallen with his majesty, and renewed a petition, frequently presented before, to dissolve the parliament. This, however, met with a very unfavourable answer: his majesty informed the lord

mayor,

mayor, that his sentiments on that subject continued unchanged; and that "he should ill deserve the title of *Father of his People*, should he suffer himself to be prevailed on to make such an use of his prerogative, as he could not but think inconsistent with the interest, and dangerous to the constitution, of the kingdom." Mr Beckford was so far from being disheartened by this answer, that he demanded leave to speak to the king; which being obtained, he made a speech of considerable length, and concluded with telling his majesty, that "whoever had already dared, or should hereafter endeavour, by false insinuations and suggestions, to alienate his majesty's affections from his loyal subjects in general, and the city of London in particular, was an enemy to his majesty's person and family, a violator of the public peace, and a betrayer of our happy constitution as it was established at the glorious revolution." To this no answer was made, though it gave great offence: and when Mr Beckford went afterwards to St James's with an address on the queen's safe delivery of a princess, he was told, that "as his lordship had thought fit to speak to his majesty after his answer to the late remonstrance; as it was unusual, his majesty desired that nothing of the kind might happen for the future." This celebrated speech was by many of the court party severely censured, as indecent, unprecedented, impudent, and little short of high treason; while, on the other hand, it raised Mr Beckford to the highest pinnacle of popular favour. He did not long, however, enjoy the applause of the people, dying within a short time after; and his death was reckoned an irreparable loss to the whole party. Several other petitions were presented on the subject of popular grievances; but the perpetual neglect with which they were treated, at last brought that mode of application into disuse. A new subject of contention, however, now offered itself. The navy was in a bad condition, and the sailors every where avoided the service. Towards the end of August 16 ships of the line were ready to put to sea; but the legality of press warrants being questioned, the manning of them became a matter of great difficulty. The new lord mayor, Bras Crosby, Esq. refused to back the warrants; which proved a vexatious matter to the ministry. They were further provoked by the unbounded liberty to which the press had been carried, and the mode of proceeding against some libellers had produced many complaints regarding the powers of the attorney general. He had filed informations and carried on prosecutions *ex officio*, without going through the forms observed in all other cases.—This (it was said by the patriotic party) was inconsistent with the nature of a free government. No power can be more dangerous to private liberty, nor to the virtue or principles of him who enjoys it. The attorney acts under a minister, and his sense of duty must be very strong, or his independence very thoroughly secured by contentment, if he is at no time tempted to swerve from the laws of conscience and equity. It is in his power to give what name he pleases to a paper, and call it seditious or treasonable; then, without the interference of a jury, he proceeds to try the offender; who, though he may be acquit-

ted, may nevertheless be ruined by the expense attending his justification. "Examples were cited on this occasion of very flagrant oppression and injustice from this very power: the laws, as was said, were become changeable at the pleasure of a judge; and the liberty of the subject was taken from him whenever he became obnoxious to his superiors. As these proceedings had therefore been the cause of very general complaint, a motion was made in the house of commons to bring in a bill for explaining and amending an act of the 4th and 5th of William and Mary to prevent seditious informations, and for the more easy removal of outlawries in the court of king's bench. This motion was rejected by a great majority of the ministerial party urging, that the power of the attorney general was the same that ever it had been, and founded on common law. The objection of power was no argument against the legality of it; it was dangerous to overthrow established customs; the actions of the attorney general were cognizable by parliament, which could not must for ever prevent a licentious exertion of power, &c. These arguments, however, notwithstanding the rejection of the motion, did not put an end to the disputes on this head. The constitutional justice themselves were at this time held up in a very despicable light, on account of some late decisions which had been deemed contrary to law and usual practice. By these the judges had assumed a power of determining whether a paper was a libel or not; and the business of the judges was confined to the determination of the fact regarding its publication; and thus, it was said, the judges had it in their power to punish a man whether seditious or not. Lord Chatham in a speech on the Middlesex election, took occasion to mention these abuses; and was answered by Lord Mansfield, who looked upon himself to be particularly pointed at. The former, however, was so little convinced by his answer, that he drew from it an additional confirmation of his own arguments; and moved that a day should be appointed for taking into consideration the conduct of the judges; in which he was ably seconded by the late lord chancellor. A committee of inquiry was accordingly moved for, on Dec. 6th 1771; but after a long debate, was rejected by 144 to 76. The affair, however, did not yet seem terminated. Lord Mansfield gave notice on that day, that on Monday he would communicate to the house of lords a matter of the utmost importance; but when that day came, he produced nothing but a paper containing the case of Woodfall the printer, as tried in the court of King's Bench that whoever pleased might read or take copy of it. This was looked upon as exceedingly insolent, and greatly disappointed the expectation of the whole house. His lordship was asked, whether he meant that the paper should be carried on the journals of the house or not? To which he answered, that he had no such intention, but only that it should be left in the hands of the clerk; on which the affair would probably have been overlooked altogether, had not the late lord chancellor, who all along strongly supported the motion, stood up to accuse lord Mansfield, from

the very paper to which he appealed, of a practice repugnant to the law of England. Hence he took occasion to propose some queries relative to the power of juries, and challenged his antagonist to a debate either at that time or soon after. But his method of proceeding was complained of as too precipitate, and an excuse was likewise made or not assigning a day for the debate at any other time; so that the matter soon sunk into oblivion. It was, however, loudly talked of without doors; and the judges, who had already fallen much in the estimation of the people, now became much more obnoxious. Pamphlets were printed containing the most severe accusations; comparisons were made between some of the law lords and their predecessors, and even the print shops were filled with ludicrous and satirical pictures. An incident, which took place soon after, contributed also greatly to lessen the character not only of the ministerial party, but even of both houses of parliament. A motion was made on the 10th Dec. 1770, by the duke of Manchester, that an address be presented to his majesty, that he would give orders for quickening our preparations for defence in the West Indies and in the Mediterranean; and particularly for securing the posts of Gibraltar and Minorca. But while the duke was ascending on the negligence of ministry, in leaving posts of such importance in a defenceless state, he was suddenly interrupted by lord Gower, who insisted on having the house immediately cleared of all but those who had a right to sit there. When motions (said he) are thus brought in by surprise, and without the knowledge of the house of their contents, it is impossible but such things may be spoken as are improper for the general ear; especially as the enemy may have spies in the house, in order to convey secret intelligence, and expose the nakedness of our possessions. His address was answered by the duke of Richmond, who complained of the interruption given to the duke of Manchester, as a proceeding both irregular and insidious. This produced a considerable degree of altercation; and the cry of *Clear the house!* sounded from all quarters. Several members tempted to speak, but finding it impossible, and shocked at this shameful behaviour, 18 or 19 of them left the house in a body. The members of the house of commons then present were not only commanded to depart, but some of the lords went personally to the bar, and insisted on their leaving the house immediately. These members alleged excuse, that they attended with a bill, and were there in discharge of their duty; but this availed nothing, and they were peremptorily ordered to withdraw till their message should be delivered; and were turned out of doors, amidst the greatest tumult and uproar. In the mean time, the 18 lords, who had just left the house of peers, had gone to the lower house, where they were listening to the debates, when the commoners, who had been ordered out of the upper house, arrived full of indignation, and making loud complaints of the affront they had received. This was resented by naming out indiscriminately all the spectators; among whom were the 18 peers, who were thus shut out from both houses. The affair terminated in a misunderstanding betwixt the two houses,

which continued during the whole session. Sixteen lords joined in a protest; and in the warmest terms censured the treatment they had met with, as well as the unprecedented behaviour of administration, who had thus attempted to suppress the freedom of argument, and render the conduct of the house an object of censure and ridicule to the whole nation.

(89.) ENGLAND, HISTORY OF, UNTIL THE TERMINATION OF THE CONTEST BETWEEN THE PARLIAMENT AND THE PRINTERS. After the discussion of the affair of Falkland's islands, a most uncommon instance of corruption, in the borough of New Shoreham in Sussex, was laid before parliament. The contest was occasioned by the returning officer, Mr Roberts, having returned a candidate with only 37 votes, when the other had 87; and on bringing him to trial for this strange proceeding, the following scene of villany was laid open. A great number of the freemen of the borough had formed themselves into a society, called the *Christian Society or Club*; but instead of keeping up the character indicated by this title, it was clearly proved by the returning officer, who formerly belonged to it, that it was employed only for the purpose of venality. A select committee of the members were appointed to sell the borough to the highest bidder. The committee men never appeared at elections themselves, but gave orders to the rest, and directed them how to vote; and after the election was over, shared the profits among themselves. Though all this was clearly proved, the returning officer was dismissed with only a reprimand from the speaker of the house of commons, for having trespassed upon the forms to be sacredly observed by a returning officer. A more severe punishment, however, was reserved for the borough, and those wretches who had assumed the name of the *Christian Club*. A motion for an enquiry being carried unanimously, a bill was brought in to incapacitate 81 freemen of this borough, whose names were mentioned, from ever voting at parliamentary elections; and, for the more effectually preventing bribery and corruption, the attorney general was ordered to prosecute the committee belonging to the Christian club: the members were allowed counsel; and many different opinions were offered regarding the mode of punishment. Some were inclined only to reprimand them, while others proposed to disfranchise the borough; however, the bill for incapacitation was passed at length, though it did not receive the royal assent till the last day of the session. The licentiousness of the press now called the attention of parliament, though the evil appeared hardly capable of being checked. At this time neither rank nor character were any security against the voice of calumny from one party or other; and indeed it was hard to say on which side the most intemperate violence appeared. The ministry, however, provoked by a long course of opposition, made the loudest complaints of the freedoms taken with their names; while it was retorted by opposition, that the abuse from the one side was as great as from the other. Some members of the house of commons complained, that their speeches had been misrepresented in the papers, and endeavoured to put a stop

to the practice of printing them. It was now considered as a matter contrary to the standing order of the house to print the speeches of the members of parliament at all; and a motion for calling two of the principal printers to account was carried by a considerable majority. The printers, however, did not attend the summons of the messenger; and a final order for their appearance was directed to be left at their houses, and declared to be sufficient notice when thus left. The disobedience of the printers on this occasion was undoubtedly heightened by the favour they obtained from the popular party; and indeed it was not without the most severe animadversions, that the ministry were able to carry their motions against them. This opposition increased by its being farther moved, that they should be taken into custody by the serjeant at arms for contempt of the orders of the house. The temper and disposition of the people towards the house was now objected, and the great impropriety of adding to their alarms by any unnecessary stretch of power; but the majority urged the necessity of preserving the dignity of the house, and putting an end to those excessive freedoms which had been taken with its members. The serjeant at arms next complained, that not being able to meet with the printers at their houses, he had been treated with indignity by their servants; on which a royal proclamation was issued for apprehending Wheble and Thomson, the two obnoxious printers, with a reward of 50*l.* annexed. But in the mean time six other printers, who had rendered themselves equally obnoxious on similar accounts, were ordered to attend the house, though the motion was not carried without great opposition, during which time the house divided between 20 and 30 times. Some of the delinquents were reprimanded at the bar, and one who did not attend was ordered to be taken into custody for contempt. Wheble being apprehended in consequence of the proclamation, was carried before Mr Alderman Wilkes, by whom he was discharged. To this magistratè it appeared that Mr Wheble had been apprehended in direct violation of his rights as an Englishman, as well as of the chartered privileges of a citizen of London; which opinion he declared in a letter to the earl of Halifax, one of the secretaries of state. Thomson was discharged in the same manner; but the captors received certificates from the magistrates, in order to obtain the promised rewards. J. Miller, one of the six who had refused to attend, was taken into custody from his own house by the messenger of the house of commons. On this he sent for a constable, and was carried along with the messenger before the lord mayor, and aldermen Wilkes and Oliver at the mansion house. The lord mayor refused to deliver up the printer and messenger at the request of the serjeant at arms; and after some disputes the messenger was committed to prison, as he had been accused by Miller of assault and false imprisonment, and the serjeant had refused to find bail; however, he was immediately released upon the bail being given. By this affront not only the majority but many of the popular party also were greatly irritated: however, the members in opposition took care to lay all the

blame on the absurd conduct of administering with regard to the Middlesex election; in consequence of which they had incurred such a general odium, that the people thwarted every measure proposed by them, and eluded and despised their power on every occasion. The lord mayor was ordered to attend the house next day; when he pleaded that he had acted in no way inconsistent with the duties of his office; as by an oath which he took when entering upon it, he was bound to preserve the franchises of the city; and his conduct was farther to be vindicated from the terms of the city charters, as recognised by act of parliament. It was then moved that he should be allowed counsel; the question appearing to belong to the lawyers, as the lord mayor did not deny the privilege of the house, though he contended for an exemption from that privilege by virtue of charters and an act of parliament. The motion however, was over-ruled, it being insisted, that no counsel could ever be permitted against the privileges of the house. This refusal of counsel took its rise from a transaction in the reign of Henry VIII. which was now pleaded as the custom of parliament. Some proposed, that the lord mayor should be heard by counsel, provided the privilege of the house was not affected; but it was considered as absurd to the last degree, that his lordship should be heard by counsel on every point except the very one in question. At the same time a motion was carried, that the lord mayor's clerk should attend with the book of minutes; and notwithstanding all opposition, he was obliged to expunge out of it the recognizance of Whittam the messenger. This was followed by a resolution that there should be no more proceedings at law in the case; a great altercation ensued, and several of the minority at last left the house in the utmost rage. Though it was now one o'clock in the morning, the ministerial party were so ardent in the prosecution of their victory, that they refused to adjourn; proceeding now to the trial of Mr Oliver, who, as well as the lord mayor, was far from expressing any sorrow for what had been done. Some proposed to censure his conduct, others were for expulsion; but when it was proposed to send him to the Tower, the utmost confusion and mutual reproach took place; some members declared that they would accompany him to the place of his confinement; others left the house, while ministry used their utmost endeavours to persuade him into some kind of apology for what he had done; but finding that to no purpose, they at last carried the motion for his imprisonment, and he was committed accordingly. Ample amends, however, were made for his punishment by the unbounded popular applause heaped on both the lord mayor and alderman on this occasion, and which indeed threatened very serious consequences. Some days after the commitment of Mr Oliver, when the lord mayor attended at the house of commons, several very alarming insults were offered to many of the members, particularly lord North; who on this occasion lost his hat, and narrowly escaped with his life. Some of the most popular members of the minority interposed, and expostulated with the mob on the impropriety of their conduct, by

rich means all further disturbance was prevented; and had it not been for this timely interference, it is supposed that the fray would not have ended without much bloodshed. After the contention was in some measure dispelled, the debates concerning the lord mayor again took place. My arguments were brought against proceeding farther in the matter; but being disregarded, the minority left the house. His lordship refused favour offered him of being committed to the custody of the serjeant at arms, upon which it was resolved to commit him to the Tower; the motion for this purpose being carried by 200 against 39. Mr WILKES, on being ordered to attend, wrote a letter to the speaker, in which he observed, that no mention had been made of his being a member; and that if his seat in parliament, to which he had been duly elected, was to be granted him, he would attend and justify his conduct. The ministry, however, were too late now to encounter this hero, and at the same time were under no little embarrassment how to get off; so at last they were reduced to the miserable shift of ordering him to attend on the 8th April 1771, at the same time that they adjourned the house to the 9th. The many affronts, which administration had of late been obliged to put up with, now rendered it necessary to fall upon some method, to show that their authority was not altogether lost. For this purpose a committee was appointed by ballot to inquire into the reason, why there had been so many obstructions to the authority of the house of commons. This committee having sat from the 28th of March to the 30th of April, at last gave in the following report. "Your committee beg leave to observe, that in the diligent search they have made in the records, they have not been able to find an instance, that any court or magistrate has presumed to commit, during the sitting of parliament, an officer of the house for executing the orders of the house. They further beg leave to observe, that they have not been able to find, that there ever has been an instance wherein this house has suffered any person, committed by order of this house, to be discharged, during the same sessions, by authority whatever, without again committing such persons. As therefore, with regard to Mr Millar, who was delivered from the custody of the messenger by the lord mayor, who for the said offence is now under the censure of the house, it appears to your committee, that it highly concerns the dignity and power of the house to maintain its authority in this instance, by retaking the said J. Millar; the committee recommend to the consideration of the house, whether it may not be expedient, that the house should order that the said J. Millar should be again taken into custody of the serjeant at arms; and that his deputy or deputies be strictly enjoined to call upon the magistrates, officers of the peace, and other persons, who by the speaker's warrant are required to be aiding and assisting to him in the execution thereof, for such assistance as the said serjeant, his deputy or deputies, shall find necessary, to enable them or them to take into custody the said J. Millar." Nothing could have been more imprudent than the arguing with such violence a contest against

such adversaries; and in which the ministry were finally baffled. What they intended for punishment really afforded their opponents matter of triumph and exultation. Every honour that the city of London could bestow was conferred upon the magistrates, while the complaints and execrations of the people became louder than ever.

(90.) ENGLAND, HISTORY OF, UNTIL THE TERMINATION OF THE SESSION OF PARLIAMENT, IN 1771. Every step taken about this time by administration seemed calculated to add to the public ill humour. Towards the end of the session a bill was brought in "for enabling certain persons to enclose and embank part of the river Thames, adjoining to Durham yard, Salisbury-street, Cecil-street, and Beaufort buildings in the county of Middlesex." This bill was opposed, as contrary to the ancient rights and privileges of the city of London; but was easily carried through both houses, though it produced a protest in the upper house; and a few days before the rising of the session, the city of London petitioned against it. In this petition it was complained, of as a violent and unjust transaction, totally unprecedented; being an invasion of the property which the city claimed in the bed of the river. It was afterwards complained of in a remonstrance, as an infringement of the rights of the people, and urged as a reason for the dissolution of parliament. The only other transaction of moment during this session related to the East India company. It was proposed to raise 2000 men in England for the service of the company, the officers to be appointed by the king, and to be paid by the company. But after much argument, it was rejected as unconstitutional and dangerous, to keep an armed force in the kingdom which was not paid by government; and that, however inconsiderable the number proposed then was, it might soon be increased on any frivolous pretence. It was likewise urged, that it would prove an obstruction to the recruiting service for our own army, on account of the superior advantages of enlisting in the company's service. The advocates for the bill urged the inconvenience of sending out a sufficient number of men annually to recruit the Indian forces; and that, unless parliament should adhere to the promise they formerly made of assisting the company in recruiting, they would be daily exposed to vast loss and expence from the tricks of recruiting parties. The session rose on the 8th of May, 1771. The many defeats that had been received by opposition during this and the foregoing sessions, now began to discourage them from proceeding such lengths in the cause of patriotism as they had formerly done. Many of them had also lost much of their popularity by taking an active part against the printers; and as every motion had been carried in favour of administration by nearly two to one, a general languor began to take place among the popular party. The only gainers indeed by the late contentions were the city magistrates and printers, who had been punished by the house of commons. On the rising of the parliament, when the lord mayor and aldermen were released from the tower, they were

welcomed by every mark of congratulation. The city was illuminated; and the mob, as usual, took vengeance on the refractory by breaking their windows. A committee was even appointed to carry on a prosecution against the speaker of the house of commons; but as this did not seem likely to afford any redress, they determined once more to have recourse to the throne. Accordingly, on the 10th July 1771, another petition and remonstrance was presented, the subjects of which were the embankments of the Thames, the proceedings against the magistrates, and a speedy dissolution of parliament. But this met with as unfavourable an answer as before. His majesty replied, that he was ready to put an end to the real grievances of his faithful subjects; but was sorry to find that a part of them still renewed requests, which he had repeatedly refused to comply with.

(91.) ENGLAND, HISTORY OF, UNTIL THE THROWING OUT OF THE ANTI-SUBSCRIPTION BILL, AND THE PASSING OF THE ROYAL MARRIAGE ACT. In the speech from the throne, when the parliament met, Jan. 21st, 1772, his majesty observed, that the performance of the king of Spain's engagements, and the behaviour of the other European powers, promised a continuance of peace; and though the necessity of keeping up a respectable naval force was evident, yet no extraordinary aid for that purpose would be necessary; and he concluded with recommending the most vigilant and active attention to the concerns of the country, with an assurance of the interposition of the crown to remedy abuses or supply defects. Little dispute was made about the addresses in answer to this speech, though an ample subject of altercation very soon occurred. This was a motion made by administration, intimating the necessity of raising 25,000 seamen for the service of the current year; "it being always necessary, (they said,) for us to preserve a superiority to the French in the East Indies, which had not been the case since they sent a considerable fleet thither. It was equally necessary to preserve the present strength of the West Indies unimpaired; as the Spaniards knew the importance of our settlements there too well, not to make an attack upon them first, if ever a rupture should take place. Twenty of the best ships in the navy were also now employed as guard ships, and wanted nothing but men to fit them for actual service." A declaration of this kind, coming immediately after the assurances of peace that had been given from the throne, was said to be a contradiction; that the peace establishment would be thus augmented till we were overburdened by it; 500,000l. would thus be added to the national expences; and as the same augmentation might every year be made on similar pretences, we should thus be obliged to submit to the burdens of war in time of profound peace. If the assurances of peace from the throne were well founded, the force in the East Indies was already too great: if, on the contrary, a war was at hand, it would be too small notwithstanding the proposed augmentation; and the same way Jamaica was likely to suffer from the inferiority. These remonstrances were by no means sufficient to put a stop to any

measure suggested by administration. The question for the augmentation was carried without a division: after which the subject of religion came to be discussed. This was occasioned by the general tendency to Arianism or Socinianism, which had for some time prevailed to a great degree, and had at last infected the established church in such a manner, that the subscription to her standards was reckoned intolerable by many of the clergy. Meetings had been frequently held by the discontented members, to consider of some mode of relief; and in the beginning of February 1772, about 250 of them, with several professors of law and physic, joined in a petition to the house of commons, expressing their dissatisfaction with the subscription to any human forms, and praying for relief. In this petition they asserted that they held certain rights and privileges from God alone, without being subject to any other authority; such as the exercise of their own reason and judgment, by which they were instructed and confirmed in their belief of the Christian religion, as contained in the holy scriptures. They accounted it a blessing to live under a government which maintained the sufficiency of the scriptures to instruct in all things necessary to salvation. Hence they concluded, that they had a right in nature, as well as from the principles of the reformed religion, to judge for themselves, what was or was not contained in the scriptures. From this invaluable privilege, however, they found themselves in a great measure precluded by the laws relative to subscription; by which they were enjoined to acknowledge certain articles and confessions of faith, framed by fallible men, as entirely agreeable to scripture. They prayed therefore, to be relieved from such impositions, and to be restored to their undoubted right of interpreting scripture for themselves, without being bound by any human explanation of it, or being required to acknowledge by subscription or declaration the truth of any formula of religious faith and doctrine whatever, excepting the holy scripture itself. The affair of subscription they looked upon to be not only a grievance to themselves, but an encroachment on their rights as men and members of a Protestant establishment, as well as a great hinderance to the spreading of the Christian religion, tending to discourage farther inquiry into the true sense of scripture, to divide communions, and to cause a mutual dislike betwixt fellow Protestants; giving occasion for unbelievers to reproach and vilify the clergy, by representing them as guilty of perjury, and of accommodating their faith to lucrative views and political considerations. It afforded also to Papists and others, disaffected to the religious establishment of the church of England, an occasion of reflecting upon it as inconsistent, and authorising doubtful and precarious doctrines at the same time that the scripture alone was acknowledged to be certain and sufficient for instruction. It had likewise a tendency to divide the clergy among themselves; subjecting one party who asserted their privilege as Protestants, to be reviled both from the pulpit and the press, by another who seemed to judge the articles they had subscribed to be of equal authority with the scripture.

itself; and, lastly, it occasioned scruples and embarrassments of conscience to those who were about to enter into the ministry, or prevent the cheerful exercise of it to those who were already entered. By these embarrassments the moral part of the petitioners found themselves at great difficulties, being obliged in some cases to join with the adversaries of revelation, in denying the one true sense of scripture to be revealed in the present established system of religion; or else to incur the reproach of having denied their subscriptions, &c. while such of the petitioners, as had been educated with a view to professions of civil law and physic, could not think it a great hardship to be obliged, as they all were in one of the universities, even at their first matriculation and admission, though at a very improper for such important disquisitions, to subscribe their assent to a variety of logical tenets, concerning which their private opinions could be of no consequence to the public in order to entitle them to academical degrees and those faculties; more especially as the course of their studies, and attention to their practice, could not afford them leisure sufficient to examine, whether these tenets were consonant to the word of God. This petition was presented by Sir William Meredith, who, along with the other members who favoured the cause, enforced it by arguments drawn from the principles of toleration. They maintained also that nothing but hypocrisy and prevarication could arise from obliging men to subscribe what they did not believe; that the repeal of the laws for subscription could prevent the increase of dissenters, so very conspicuous at this time, and incline many of them to return to the church. The articles themselves were said to have been compiled in a hurry; they contained doctrines highly controverted; and that this restraint on the consciences of the clergy was of all others the greatest hardship. The majority of parliament, however, were inimical to the petition, though some who opposed it did for time to consider it more deliberately, and refer it to a committee of the clergy. By which it was urged, that the matter of the petition was a violent infraction of the laws of the civil religion; and that if this was granted, a similar would soon follow against the liturgy. The conduct of many of the petitioners, instead of being founded in any regard for religion, had been in hypocrisy and dissoluteness, and proved in many instances from a disbelief of the divinity, and of the divinity of our Saviour. The complaints of men were to be disregarded, when they wished to profit by the emoluments of the church without subscribing to its laws; besides, the king was bound by his coronation oath to maintain the church government without alteration. It was likewise urged, that if people were restrained by no other article, than an assent to the truth of the scriptures, the church would be over-run with impiety. Many had already founded blasphemous tenets on the right private opinion; and though it could not be proved that every man has this right for himself, yet none has a right to obtrude his singularities on others; and if any of the clergy found the

delicacy of their consciences affected after they had accepted of benefices, they were welcome to leave them. Some of the more moderate opposers of the petition endeavoured to vindicate the character of the clergy from the imputations laid upon them; and contended that the legislature had a controuling power over the articles of the union, and confirmed their assertion by mentioning the act against occasional conformity, as well as another against elective patronages, both of them passed since the union: and it seemed to be the general wish of the house that the professors of law and physic might be relieved from subscription, though they did not consider their share in the matter as of any great importance to the public. It was, however, at last thrown out by a majority of near 150. The rejection of the subscription bill was followed by that of a bill for quieting the possessions of his majesty's subjects from dormant claims of the church; after which the attention of parliament was called to one of the utmost importance, and which was introduced by a message from the king. This was the famous *royal marriage bill*, occasioned by the marriage of the duke of Cumberland with Mrs Horton, a widow lady, daughter of lord Irnham, and sister to colonel Luttrell, and that of the duke of Gloucester with the countess dowager of Waldgrave. By the message it was recommended to both houses to take it into their consideration, whether it might not be expedient to supply the defects of the law then in being, and by some new regulations more effectually to prevent the descendants of his late majesty (excepting the issue of the princesses who had married, or might hereafter marry into foreign families) from marrying without the consent of his present majesty, his heirs, and successors. In consequence of this a bill was brought in, declaring all such marriages, without the consent above mentioned, to be null and void. The descendants of his majesty, however, if above the age of 25 years, might marry without the royal consent, provided they gave intimation a year before hand to the privy council, and no opposition to the match was made by parliament during that interval. This bill met with the most violent and powerful opposition. The principal arguments against it were expressed in two protests from the upper house, and were to the following purpose: 1. The doctrine that marriages in the royal family are of the highest importance to the state, and that therefore the kings of this realm have ever been trusted with the care thereof, is both absurd and unconstitutional; though it would from that period have the force of a parliamentary declaration. The immediate tendency of this was to create as many prerogatives to the crown, as there are matters of importance in the state; and to extend them in a manner as vague and exceptionable, as had ever been done in the most despotic periods. 2. The enacting part of the bill had an inconvenient and impolitic extent; namely to all the descendants of George II. In process of time, that description might become very general, and comprehend a great number of people; and it was apprehended, that it would be an intolerable grievance for the marriages of so many subjects, perhaps dispersed among the va-

rious ranks of civil life, to be subject to the restrictions of this act; especially as the abettors of this doctrine had also maintained, that the care and approbation of the marriage also included the education and custody of the person. This extensive power might in time make many of the first families of the kingdom entirely dependent on the crown; and it was regretted that all endeavours to limit, in some degree, the generality of that description, had proved ineffectual. 3. The time of nonage for the royal family appeared to be improperly extended beyond the limit of 21 years; a period which the wisdom of the constitution seems with great wisdom to have assigned to minority. 4. The deferring their marriage to the age of 26 might also be attended with other bad consequences, by driving them into a disorderly course of life, which ought to be particularly guarded against in those of such an exalted station. 5. The power given by this bill, to a prince to marry after the age of 26, is totally defeated by the proviso, which declares the consent of parliament to be ultimately necessary. Thus great difficulties must be laid on future parliaments, as their silence in such a case must imply a disapprobation of the king's refusal; and their concurrence with it might prove a perpetual prohibition from marriage to the party concerned. 6. The right of conferring a discretionary power of prohibiting all marriages, appears to be above the reach of any legislature whatever, as being contrary to the inherent rights of human nature; which, as they are not derived from, or held under, the sanction of any civil laws, cannot be taken away by them in any case whatever. The legislature no doubt has a right to prescribe rules to marriage as well as to every other kind of contract; but there is an essential difference between regulating the mode by which a right may be enjoyed, and establishing a principle which may tend entirely to annihilate that right. To disable a man during life from contracting marriage, or, which is the same thing, to make his power of contracting such marriage dependent neither on his own choice nor on any fixed rule of law, but on the arbitrary pleasure of any man, or set of men, is exceeding the power permitted by Divine Providence to human legislature, and directly contrary not only to the divine command, but also to the rights of domestic society and comfort, &c. 7. This bill has a natural tendency to produce a disputed title to the crown. If those who are affected by it are in power, they will easily procure a repeal of this act, and the confirmation of a marriage made contrary to it; and if they are not, it will at least be the source of the most dangerous faction that can exist in any country, viz. one attached to the pretender to the crown; whose claim, he may assert, has been set aside by no other authority than that of an act to which the legislature was not competent, as being contrary to the common rights of mankind. 8. The bill provides no security against the improper marriages of princesses married into foreign families and those of their issue; which may fully as materially affect the interest of this nation, as the marriages of princes residing in the dominions of Great Britain.

It provides no remedy against the improper marriage of the king reigning, though evidently the most important of all others to the public. It provides nothing against the indiscreet marriage of a prince of the blood, being regent at the age of 21; nor furnishes any remedy against his permitting such marriages to others of the blood royal, being fully invested with the regal power for this purpose, without the assistance of council. The answer to all these arguments was, that the inconveniences so much talked of were not so imaginary; and if the king should make an improper use of his authority, parliament had either in their power to prevent the effect, or punish the minister who advised it. The crown it was said, was dishonoured by improper connections, and many of the greatest national calamities have proceeded from improper alliances between the royal family and subjects; and that from after experience, we should find as many real grievances ensue from this act, it could easily be repealed at that time as thrown off now, and on better grounds. It was rapidly carried through both houses; in the upper house by 90 to 26; and in the lower by 215.

(92.) ENGLAND, HISTORY OF, UNTIL THROWING OUT OF THE DISSENTERS. Although the late decision, concerning subscription to the 39 articles, did not promise much access to any innovations in religious matters, the case of dissenting ministers was introduced soon after the discussion of the royal marriage act; the advocates for it being encouraged by bringing it forward, chiefly on account of favourable hints thrown out in the debates on the subscription bill. A petition was presented by a great body of these people, praying to be relieved from the hardship of subscribing to the articles of a church to which they did not belong. It, however, was most violently opposed by the opponents of the former bill, though with little success in the house of commons, where, to their honour, it was carried through by a prodigious majority. It was maintained that nothing can advance the true interest of religion so much as toleration; and if articles of subscription are necessary, it must only be for men destitute of principle, and who would, in compliance of ambition or avarice, as readily subscribe to a set of articles as another. If thus any of the fundamental doctrines of Christianity are impugned, there are many laws in existence to correct impiety. The dissenters have indeed altered some of their original forms and doctrines, but chiefly in matters of indifference. It is the cultivation of learning, leisure, and refinement, to give many opportunities of altering established forms. This has been the case formerly, and always will be. The dissenters have long been virtually exempted from this subscription; and yet the piety and decency of many of them, particularly in Scotland and Ireland, where no such laws are being, sufficiently show, that men, whose minds are steadfast in the purity of religion, will not be confined nor influenced by laws of human institution. But though the dissenters enjoy full liberty by connivance at present, where is their freedom

At the sudden attacks of malice and envy, it may be backed by the sanction of law? Neglect of a law by connivance is an additional proof of the necessity of abrogating that and liberty is but an empty name, where it is enjoyed by an oversight only, as it were, of superiors. In the house of lords, however, it was rejected by a majority of 70. Here a doctrine of universal toleration was strenuously opposed, as well as the great danger set forth which the church of England would be exposed to, by departing from the laws which guard its privileges. The dissenters, it was said, had reason to be satisfied with the favour they enjoyed by connivance; and the laws were only on record as a necessary curb, lest in the decay of a declining kingdom, religion should find itself in need of protection against heresy and blasphemy. See BLASPHEMY, § 5.

ENGLAND, HISTORY OF, UNTO THE ACCTAL OF LORD CLIVE. The only other affair of this session were some attempts at an intrusion into the affairs of the East India company, which were now in a very critical situation. These, however, did not come under consideration till the next session, which took place Nov. 26, 1772, when his majesty gave this situation of the affairs of the company as a reason why he had called together sooner than usual. The continuance of the pacific disposition of other powers was mentioned, and satisfaction expressed, that the continuance of peace had afforded an opportunity of using the naval establishment, though a great must always be necessary for the defence of kingdoms. Economy was promised with respect to the supplies, and it was recommended, that every method that could be devised to reduce the expences of provisions. The affairs of the East India company took up the greatest part of the session. It had been projected, as far back as the year 1767, when they were in a very flourishing condition, to bring them under the inspection of government, that the nation might share in the immense wealth supposed to be enjoyed by the company. The design, however, did not succeed at that time, nor would it probably have easily brought to bear, had not the affairs of the company been embarrassed by the bad conduct of their servants. During the last session a bill had been brought in, for restraining the government council from all kind of trade, as well as for enlarging the power of the company over its territories. The bill, however, was rejected after a second reading, and indeed was thought to be even proposed only to introduce the success of the bill. The debates on the subject procured a great measure the general belief of two, of much importance to the success of the bill, viz. that the affairs of the East India company were in a very bad situation, owing to the misconduct of its servants; and that the company was in any rate insufficient for the government of its extensive possessions; of consequence that there was an evident necessity of giving up the government of it to the crown. A motion was made in parliament, by a gentleman unconnected with administration, for a select committee to inquire into the affairs of the company; but

many reasons were urged against this appointment, particularly that the season was too far advanced for a business of such importance; that the committee, being a secret one, was not accountable for its conduct; and that, as the minister would have it in his power to nominate the members of the committee, considerable partiality might on that account take place. The motion, however, was carried without a division; and the members were chosen by ballot. The affairs of the East India company proceeded from bad to worse during the recess. The treasury at home was quite exhausted; while bills to a vast amount drawn on Bengal were nearly due; which, with their debt to the bank and other public offices, along with the sum to be paid to government, reduced them almost to the brink of bankruptcy. They were therefore reduced to the expedient of borrowing a sum of money from administration; but their application was received with great indifference. The minister desired them to apply to parliament. The reports of the select committee, in the mean time, contrary to the promise of secrecy, were published, and gave the public no favourable opinion of the behaviour of the company's servants. On the meeting of parliament, the minister moved for another committee, under the title of the *committee of secrecy*, to consist of 13 persons, for taking into consideration the state of the company's affairs; which might thus undergo a full investigation without any thing being known to the world, which had excited such indignation in the former case. The members of this new committee were also to be chosen by ballot; so that no objection could militate against them, that did not militate with equal strength against the whole house. It was objected, that this mode of secret inquiry, by a small number, was unprecedented and unconstitutional; that the members would in effect be nominated by the minister, and act under his direction; and that a free investigation by the whole parliament was essentially different from that by a secret committee. In the latter case, every information that the minister thought proper to conceal would be withheld: at any rate a committee of secrecy is an evident absurdity; a committee can be no longer a secret than during the time it takes up for inquiry. Its proceedings must be laid before the public; and in case of unjust accounts, the parliament had no means of being undeceived. These reasons, however, were of no avail. The committee of secrecy was carried, as the other had been, without a division; and the members, though chosen by ballot, were almost all devoted to administration. The select committee was likewise revived, so that between them the nation would have every requisite degree of information on the whole affair. In a very short time after the appointment of the secret committee, a report was given in, stating that the company were in great distress for want of money; and as this was the case, a bill ought to be brought in for restraining them from sending out supervisors to India, a scheme which they had meditated at this time. The minister and his adherents enlarged greatly on the utility of this bill; which, they said, was highly expedient. It was the sincere wish of parliament to render them

a great and glorious company: it was absolutely necessary for this purpose not to allow them to engage in an expensive commission, at a time when their affairs were so much embarrassed, that they were obliged to apply to government for a loan. It was even doubted whether the company, without the sanction of parliamentary authority, had power to appoint a commission of this kind. On the other hand, the minister's proposal was said by opposition to be unconstitutional and insidious. The want of cash at present experienced by the East India company was not of such great importance, their credit being then as fully established as ever. They had made choice of a set of men in whom they could confide; the many losses occasioned by their servants made the commission indispensably necessary; and the expence would be paid from the savings which must undoubtedly arise from so prudent a step. It was unreasonable because the East India company, or any other, are distressed, to allow them no opportunities of extricating themselves. The company could not be said to want respect for parliament; they had showed this already by delaying the departure of the commission till the inquiry begun by the house was finished: nor could they be wanting in respect to their own interest, character, and constitution; which they seemed to show by every possible mark of opposition to this bill. Administration boasted of their intentions and their wishes to render this company great and glorious: but how could we expect greatness or glory to proceed from a quarter where it did not exist? The dignity of parliament was lessened, and its glory effaced, by the conduct of ministers, and the many wanton acts of authority lately committed. It was a curious method of rendering a company great and glorious, to plunder the proprietors of immense sums of money by exorbitant grants, or by taking away their charters; for after this act it was plain that charters could no longer be depended upon. Two gentlemen belonging to the company, and then present in the house, offered to pledge themselves, that the commission of supervision should not be allowed to depart, until, from further reports, a full knowledge of the company's affairs should be acquired. This, however, was instantly rejected, it being said to be defective in security; that the East India company would not scruple to make an agreement of this kind to day and break it to-morrow; which could only be prevented by an act of parliament, especially as the ministry had no motives for promoting this measure, but a regard for the welfare of the company, and a desire to restore its affairs to a better state. Notwithstanding all the arguments used by administration in favour of this bill, however, the company were so far from thinking it to their advantage, that they used every endeavour to prevent its passing into a law. They petitioned; and some of their servants were examined in the house of commons, in order to show the necessity of supervisors being sent out, who might be qualified to reduce their affairs to some order by being on the spot, and enabled to curb the excesses of which the company's servants had too frequently been guilty. During this examination it appeared, that from the year 1765 to 1773 the expences of the company had

increased from 700,000l. to 1,700,000l. annuall and that government had received near two millions from the company every year; that it had immense profits in extraordinary, while the proprietors lost considerably of the dividend while the profits of their trade alone would have produced. In spite of all opposition, however, a bill for restraining the company from sending any commission of supervision was carried by a majority of 153 to 28. In the house of lords met with similar success, being carried by 66 to 6, though the minority entered a protest. The reasons given against it were, that it took away from a great body corporate, and from free subjects, the exercise of a legal franchise, and put out any legal cause of forfeiture assigned. The persons appointing the commissioners had by a right to elect, and the persons chosen had a legal capacity of being elected. The supreme power had a full right vested in them agreeable to powers and conditions of their appointment, though no abuse was suggested, nor any frequency charged upon them, those legal rights and capacities were taken away by a mere arbitrary exercise of power, the precedent for which leaves no security to the subject for his liberties. This seemed likewise a manifest violation of the faith. The charter of the East India company granted by the crown, authorized by act of parliament, and purchased for valuable consideration money lent and paid. By this the company was allowed to manage their own affairs as they thought proper, and by persons of their own appointment; but by this bill the exercise of this power was suspended, and by grounding the supervision on the actual interference of parliament with the affairs of the company, established a principle, which might be used for perpetuating the restraint to an indefinite length of time. It may be difficult to settle the legal boundary of legislative power, but it is evident, that parliament is as much bound to any individual to observe its own compact, as otherwise it is impossible to understand what is meant by public faith, or how public credit can subsist. It appeared by evidence upon oath and by bar of the house of lords, that the company had received assurances from their chairman and deputy chairman, that the appointment of a commission for superintending and regulating their affairs would be approved by administration; and it was extremely hard, that they should be able to find no security for their charter privileges, and that those very ministers, under whose sanction they had reason to believe they were all along acting. It was also the more incumbent on the company to give the most strict attention to their affairs, to enable them to answer the exorbitant demands of government; as it appeared from the witnesses on the bar, that its exactions amounted to more than the whole profits of the late acquisitions, and that the trade ensuing from them; while the proprietors who had spent so much, and so often risked their all for obtaining these acquisitions, had not been permitted even to divide so much as the profits of their former trade would have afforded. The select committee now gave in their second report containing a statement of the debt, credit, and defects of the company in England; beginning

account of the cash in the company's treasury the 1st Dec. 1772, and containing a statement all their debts and claims against them in every part of the world. Thus it appeared that the cash, credit, and effects of the company amounted to L. 6,377,299 : 10 : 6, and their debts to 2,032,306, which being deducted from the above account of their effects, left a balance in favour of the company of L. 4,364,993 : 10 : 6, without any violation of the fortifications and buildings of the company abroad. The statement, however, was complained of as unfair; and it was held, that impartiality was not to be expected in a set of men who had it in their power to make what report they pleased for the interest of government measures: but the members avowed their innocence; and administration insisted, that if proof could be brought that the statement was unfair, the house was bound to adhere to it. The business was revived after the holidays, by an application from the company to government, for a loan of L. 1,500,000 for four years; 6 per cent interest, with liberty of repaying the same according to the abilities of the company, in instalments of not less than L. 300,000; and that the company should not make a dividend of more than 6 per cent, until the loan should be reduced to 750,000; that then they might raise their interest to 8 per cent, and after the whole loan was discharged, that the surplus of the neat profits in England, above the said dividend, should be appropriated to the payment of the company's bond debt, until it was reduced to 500,000, when the surplus profits should be equally divided between the public and the company. It was also requested, that the company should be released from the heavy penal interest, imposed by the non-payment of money owing in consequence of the late acts for the indemnity on the company; and that they should be discharged from the annual payment of the L. 400,000 to the public, and the remainder of the five years specified in the indenture. They farther requested, that the payments of the Duannee revenues, of the charges of collection, expences of Bengal, company's accounts of sales, &c. should be delivered annually in instalment, and that leave might be given to the company to be free of all duty to America, and to foreign parts. This request was judged expedient to be granted, and the following resolutions were passed, to wit, "That the affairs of the East India company are in such a state, as to require the assistance of parliament; that a loan is necessary to settle the company's affairs; that the supply be granted; and that care be taken that the company be prevented from experiencing the like exigencies for the future. The two following motions were also founded upon the report of the committee, viz. That, supposing the public should advance a loan to the East India company, it was the opinion of the committee that the dividend should be restrained to 6 per cent, the payment of the sum advanced; and that the company be allowed to divide no more than 6 per cent, until their bond debt be reduced to 500,000. These severe restrictions were judged to be necessary by administration for the security of the company, and were such, they said, as every creditor

has a right to make before hand, with a person who wishes to borrow money from him. The company, however, replied, that these restrictions were contrary to the proposals they had made, and void of foundation, as being built on the erroneous reports of the secret committee. The chairman of the company declared at a general court, that the government had agreed, or would agree, to the proposed increase of dividend, before the participation of profits took place between the government and company; the first lord of the treasury had told him so, and now wished to deny what he had said, by using these expressions in private conversation, and when he did not consider the chairman as acting officially. But it was the case, to what purpose did public men hold conversations, since they were afterwards to deny or forget what passed? Some time was also demanded to consider of these motions; but that being denied, the question was put and carried as the ministry wished. The next step was to deprive the company of their territorial right to the countries they possessed in the East Indies. This had been allowed them in the most explicit manner, as appears by some of the papers, which passed between the French and English ministers, during the negotiations for the treaty of Paris; from one of which papers the following is an extract: "Respecting those territorial acquisitions which the English East India company have made in Asia, every dispute relative thereto must be settled by that company itself, the crown of England having no right to interfere in what is allowed to be the legal and exclusive property of a body corporate, belonging to the English nation." This territorial right, however, was now denied. After reading the company's petition, lord North told the house, that it was the opinion of several great lawyers, that such territorial possessions as the subjects of any state shall acquire by conquest, are virtually the property of the state, and not of those individuals who acquire them. It was his opinion, however, that it would be more beneficial to the public and to the East India company, to let the territorial acquisitions remain in the possession of the company for a limited time not exceeding six years, to commence from the agreement between the public and the company. At the same time it was moved, that no participation of profits should take place between the public and the company, until after the repayment of L. 1,400,000 advanced to the company; and the reduction of the company's bond debt to 1,500,000. That after the payment of the loan advanced to the company, and the reduction of their bond debts to the sum specified, three fourths of the neat surplus profits of the company at home, above the sum of 8 per cent upon their capital stock, should be paid into the exchequer for the use of the public, and the remaining fourth be set apart either for reducing the company's bond debt, or for composing a fund for the discharging of any contingent exigencies the company might labour under. These proceedings were exceedingly disagreeable to the company. They now presented a petition complaining of the injustice of demanding any farther terms on account of a loan, after that loan was discharged. The limitations of the

company's dividend to 7 per cent, after the discharge of the loan, until their bond debt should be reduced to L. 1,500,000, seemed not to be founded upon any just calculation of their commercial profits; nor could it with reason be alleged that it was necessary either to their credit or that of the public to refrain them in such a manner. The additional dividend of 1 per cent was an object of some consequence to the proprietors, but very little to the discharge of their debt to the public; and the hardships of being limited in this manner were exceedingly aggravated by the losses sustained, and the expences they had incurred in acquiring and securing the territorial revenues in India, at the risk of their whole capital, while the public reaped such great advantages. The limitation of the company to a term not exceeding six years, for the possession of their Indian territories, they looked upon to be entirely arbitrary, as it might be construed into a final decision against the company, respecting those territories to which they insisted that they had an undoubted right. Neither could they acquiesce in the resolutions by which three 4ths of the surplus nett profits of the company at home, above the sum of 8 per cent per annum upon their capital stock, should be paid into the exchequer for the use of the public, and the remainder be employing either in further reducing the company's bond debt, or for composing a fund to be set apart for the use of the company in case of extraordinary emergencies; such unheard of disposal of their property without their consent not being warranted by the largest pretensions ever made against them. It was likewise subversive of all their rights and privileges, by denying them the disposal of their own property after their creditors were properly secured by law. Their petition concluded with assuring ministers, that, rather than submit to these conditions, they desired that any claims against the possessions of the company might receive a legal decision; from which, whatever might be the event, they would at least have the satisfaction to know what they could call their own. No regard being shown to this petition, the motions were carried in favour of administration. To make some kind of recompense, however, it was agreed on their part, that as the company had a stock of teas amounting to about 17 millions of pounds in their warehouses, they should be allowed to export as much of it as they thought proper free of duty, and employ the money thence arising for the behoof of their own affairs. This concession in favour of the East India company proved in the event the loss of the American colonies; nor indeed could these arbitrary proceedings with such a considerable body tend to impress the minds of any part of the nation with ideas favourable to the views of administration. In other respects the minister abated nothing of the disposition he had from first to last shown with regard to the company. On the 3d May, 1773, the following resolutions were laid down by him as the foundation of a bill for establishing certain regulations for the better management of the East India company, as well in India as in Europe. These were, 1. That the court of directors should in future be elected for four years; six members annually, but not to

hold their seats longer than four years. 2. That no person should vote at the election of the directors, who had not possessed their stock 12 months. 3. That the stock of qualification should for the future be L. 1000, instead of L. 500. 4. The mayor's court of Calcutta should for the future be confined to small mercantile causes, to which its jurisdiction only extended before the territorial acquisitions. 5. That, instead of this court, there be taken away, a new one should be established, consisting of a chief justice and three puisne judges. 6. These judges to be appointed by the crown. 7. That a superiority be given to the president of Bengal over the other presidencies in India. Each of these resolutions was carried by a great majority. The salaries of the judges were fixed at L. 6000 each, and that of the chief justice L. 8000. The governor of the council was to have L. 25,000 annually, and the members of the council L. 10,000 each. By the friends of the company, however, the bill was supposed to have a tendency to effect a total alteration in the company's constitution in England, as well as the administration of all its presidencies in Asia, in order to subject all their affairs, both at home and abroad, to the immediate power of the crown. A delinquency was charged, nor any specific ground of forfeiture assigned; yet by this bill more than 1200 freemen were to be disfranchised and deprived of any voice in the management of their property. By cutting off the L. 500 stockholders, the proprietary would become more manageable to the crown; nor was there any security, that the directors would be faithful to the interests of the company, when they were no longer responsible to them for their actions. But by the establishment of a general presidency over all the affairs of the company, and by the nomination of judges in India, government would in effect transfer the whole management of the affairs of the company to the crown, and the company would have no farther share in the business than to pay what salaries the crown thought fit to assign them. The proprietors of L. 500 stock presented a petition, setting forth, that, by King William's charter granted to the company, and repeatedly confirmed since that time, in consideration of many large sums repeatedly advanced to the company to the public, they were legally possessed of a right of voting at the election of directors, making of by-laws, or in any other manner relating to the affairs and government of the company; but by a clause in this regulating bill they were deprived of this right, and that under pretence of preventing the pernicious practice of splitting stock by collusive transfers; but that they were the proprietors from giving way to these practices, that in the year 1767 they petitioned parliament for an act, by which the several proprietors intitled to vote should be obliged to have this qualification six months, at least, before the exercise of their right, afterwards extending to twelve months, rather than the act should fail of its intended effect. This proposed increase of the qualification of the voters, however, could not in any degree answer the end desired; for the splitting of stock being confined to such prop-

as held large quantities, they would find it easy matter to place their stocks in the hands of half the number of persons, and thus extend their influence in a great and undue proportion; if ever government conceived designs against the company, they would find it much easier to rule them while the proprietors were few and lent, than when they were numerous, and at the same time independent and possessed of moderate fortunes. This petition produced a motion in the house of commons, "That it does appear that the proprietors of L. 500 stock of the East India company have been guilty of delinquency in the exercise of their charter according to the several acts of parliament made in their behalf." This, however, being rejected, their regulating bill passed in the house of commons by a majority of more than six to one. The house of lords it passed by 74 to 17. The duke of Richmond moved for a conference with the house of commons; but this was refused. He moved that copies of all the papers which had been laid before the commons should be laid before the lords also; but this being likewise rejected, he joined six other members in a protest, the substance of which was, that the whole was a matter of government to get the power and wealth of the company into their hands; pointing out at the same time the many particular infringements of public and private rights by passing the bill. At this time, inquiries went on by the select and committees; the affairs of the company were investigated from the year 1756, and many evils examined concerning them. A report presented by general Burgoyne, containing charges of cruelty and rapacity in the conduct of several gentlemen, concerned in the management of the affairs of the company; particularly with regard to the deposition of Surajah Daulah in 1756. This was said to have been the root of all the evils that had happened since that time. He insisted much on the treachery used in coming about that revolution, and particularly the infamous treaty with Omichund; exposing the conduct of lord CLIVE, who had caused admiral Watson's name to be affixed to that treaty, and the admiral had refused to sign in person. He concluded with moving for the restitution of all the money received in presents otherwise in India, while the receivers acted in excess of their capacity; and at last stated the following reasons: "That all acquisitions made under the name of a military force, or by treaty with the powers, do of right belong to the state; that all acquisitions obtained by such means are illegal; and that great sums of money had been gained by such means from the sovereign princes of India. The general belief that many of the company's servants had acted in a most infamous manner, was at this time so strong, that the above resolutions were carried almost unanimously. Lord Clive defended himself by general protestations of innocence; which, however, gained but little credit. He entered into a particular refutation of the charges against him. His friends were not of opinion that these were of an atrocious nature, and wished to excuse him by policy, necessity, &c.

rather than load him with any great degree of guilt. The treaty with Omichund was justified by necessity. Some said, indeed, that as Omichund had the character of the most accomplished villain in Asia, an Englishman only wished to have a trial of skill with him. This severe sarcasm, however, was a mere piece of wit, without any solid foundation; for the crime, if any there was in that transaction, undoubtedly lay in the de-throning a sovereign prince by means of traitors, not the cheating of these traitors of their reward. Indeed, if once we admit treachery into our dealings at all, it is in vain to pretend any subjection to the rules of justice; for we are already beyond its jurisdiction. General Burgoyne now moved, "That lord Clive, in consequence of the powers vested in him in India, had received at various times presents to the amount of L. 234,000 Sterling, to the dishonour and detriment of the state;" but this being rejected after violent debates, the following was substituted: "That lord Clive did, in so doing, abuse the power with which he was entrusted, to the evil example of the servants of the public." This motion also being rejected, another was made, "That lord Clive, when he received the sum above mentioned, did at the same time render great and meritorious services to his country." Thus the matter was concluded, and the affairs of the company delivered into the hands of administration, who declared that their regard for its welfare was the sole motive for bringing about this revolution.

(94.) ENGLAND, HISTORY OF, UNTO THE AMERICAN REGULATION ACTS. The affairs of the East India company were succeeded by those of America. The ill humour occasioned by the taxes laid on that country has been already taken notice of, § 85, 86. The stamp act had excited among them a spirit of industry, economy, and a desire of serving themselves with their own manufactures, which they had never forgotten. This was at that time, as well as afterwards, imputed to wilfulness, or the discontent of a few, which would afterwards subside of itself, or be suppressed by the voice of the majority; when things would of course revert to their old channel. The trifling tax on tea, however, which had not been repealed, and the allowance given to the company to export what quantities they pleased, now threw matters into a ferment not to be quelled by any means whatever. The various proceedings in America, the tumults, and subsequent war, are fully related under the article AMERICA, § 12—14; 27—33. Here it only remains to give an account of the manner in which the legislature and people of Great Britain were affected by these events. It has already been remarked, that ever since the peace in 1763, the disposition shown by government to augment the revenue, had produced in the popular party of Great Britain a spirit very similar to that manifested by the Americans, though in an inferior degree; so that the patriots of Britain considered the Americans as oppressed by government, and suffering in the same cause with themselves. The destruction of the tea at Boston and other places in America, however, considerably diminished the number of their friends, and made

many of those who still adhered to their cause much less sanguine. The matter was announced to parliament by a special message from the throne. Lord North and the other ministers set forth the conduct of the colonists, particularly of the town of Boston, in a most atrocious light; and concluded that now government was perfectly justifiable, in adopting any measures they might think proper, to redress the wrong, and inflict such punishment on the towns as the enormity of the crime seemed to deserve. Opposition did not pretend to exculpate, though they still attempted to excuse them, by deriving all the disturbances in that country from the arbitrary and absurd measures pursued, and obstinately adhered to, at home. This charge the minister evaded by drawing the attention of the house to the more important consideration, Whether the Americans were now to be dependent, or independent, on Great Britain? The Boston port bill being then brought in; was carried, but not without considerable opposition, both within and without doors. A petition was first presented by Mr Bollar, agent for the council of Massachusetts's Bay, urging an act of queen Elizabeth for the security of the liberty of the colonies. This was presented before the bill had actually made its appearance; but so little regard was paid to it, that, during the very time it lay on the table, the bill was brought in by Lord North. After it had passed two readings, that gentleman presented another, desiring to be heard in behalf of the town of Boston, for the council of Massachusetts's Bay. This was absolutely refused; because, though Mr Bollar was agent for the colony, he was not for the corporation of the town of Boston. Neither could he be so for the council of Massachusetts's Bay; for as that was necessarily fluctuating, the body which had appointed him was now no longer existing. This appeared very inconsistent to many of the members, and produced a greater opposition in the house than would otherwise in all probability have ensued. A new petition quickly followed from the lord mayor, in name of the natives and inhabitants of North America residing at that time in London. This was written in a more spirited style, and boldly insisted that the bill was illegal, unprecedented, and unjust; and that, under such a precedent, no man or body of men in America could have a moment's security; the charge being brought by the enemies of the towns, and the punishment inflicted without hearing them in their own defence; or even making them acquainted with the charge; and they concluded with these remarkable words, that "the attachment of America would not survive the justice of Britain." As little regard being paid to this as to the former petitions, and all proposals for a delay rejected, the bill passed both houses without a division; the minority, notwithstanding their opposition, not choosing to dissent publicly from the first step taken by government to reduce the disobedient colonies. That this obnoxious bill might not be sent to America without some mitigation, however, they proposed to repeal the duty on tea laid on in 1767; but this was also rejected, probably from a vain expectation, that the opposition of the Americans was that of a mere tumultuous

mob, and that, by showing a proper spirit of perseverance, the minister could not fail to come off victorious at last. The extreme obduracy shown by ministers in this first instance, undoubtedly proved very prejudicial to their cause, not only by exasperating the Americans, but by rousing the indignation of the minority, and making their opposition so violent and determined, that the Americans could not but conclude that they had a very strong party in their favour on this side of the Atlantic. This appeared in every subsequent transaction relating to the colonies. The bill for regulating the government of Massachusetts's Bay did not pass without a protest, from which we take only extract the following sentence; "This is unexampled in the records of parliament, has been entered on the journals of this house as voted *mine dissentiente*, and has been stated in the debate of this day, to have been sent to the colonies, passed without a division in either house, and therefore as conveying the uncontroverted personal sense of the nation. The despair of making virtual opposition to an unjust measure has been construed into an approbation of it." The late consequences ensued on passing the act for the virtual administration of justice. In the protest on this occasion the lords used the following expressions: "The bill amounts to a declaration, that the house knows no means of retaining the colonies in due obedience, but by an army rendered independent of the ordinary course of law, in a place where they are employed. A military law sufficient for governing upon this plan cannot be maintained without the inevitable ruin of the nation: This bill seems to be one of the many experiments towards the introduction of essential innovations into the government of this empire. The virtual indemnity provided by this bill to those who shall be indicted for murders committed under colour of office, can answer no other purpose: We consider that to be an indemnity which renders trial, and consequently punishment, impracticable. And trial is impracticable, when the very governor, under whose authority acts violence may be committed, is impowered to let the instruments of that violence to go on at a distance from the scene of their offence, beyond the reach of their prosecutor, and the local evidence which may tend to their conviction. The authority given by this bill, to compel the transportation from America to Great Britain of a number of witnesses, at the pleasure of the prosecutor, and prosecuted, without any regard to their age, sex, health, circumstances, business, or duties, seems to us so extravagant in its principles, and so impracticable in its execution, as to confirm us farther in our opinion of the spirit which animates the whole system of the present American regulations." A still greater opposition was made to the Quebec bill, so that, before it could be carried, the ministers were obliged to drop many of that high and aspiring tone to which they had accustomed themselves in talking of America as *sais*. The minority contended, that here, without any necessity pleaded, or even suggested, an arbitrary influence was extended by act of parliament to that province, furnishing a dangerous precedent.

cedent, and an additional instance of the aver- which ministry bore to the rights of the peo-

They argued likewise in favour of the mode rial by juries, and thought that the establish- of the Roman Catholic religion there gave it reference over the Protestant, which was now y to be exercised by toleration. The people arge also were alarmed at the religious part of bill, and it is thought that the suspicions con- ed at this time contributed in some measure be dangerous riots of 1779 and 1780. See § . At the conclusion of the session, the king, ressed the greatest satisfaction at what had been eed, and hopes of the good effects that would nd the new regulations. The reception they

with in America is related in its proper place; Britain the people seemed to wait the event h indifference, but their bad success with the nists furnished the minority with new matter reproach on administration. The parliament he mean time was dissolved by proclamation, a very short time allowed for the election of members; so that if opposition at that time any strength, they had not now time to exert

The new parliament met on the 30th Nov. 4; when his majesty acquainted the houses : a most daring spirit of resistance still prevail- n America, notwithstanding the most proper us had been taken to prevent the mischiefs ce arising, and assured them, that they might end on a firm resolution, to withstand every mpt, to weaken or impair the supreme autho- of this legislature over all the dominions of crown. In answer to this speech, the minori- demanded a communication of all the letters, ers, and instructions, relating to American af- s; but this being over-ruled, and the address ed as a matter of form, American affairs were yed, in spite of all opposition, till after the days. In the question on the address, the ma- ty in favour of administration, was 191; the ts being 264 to 173.

75.) ENGLAND, HISTORY OF, UNTO THE A- RICAN RESTRAINING BILL. In the beginning 1775, the minority received a considerable ac- ion of strength by the return of lord Chatham, r a long absence. He testified his disapproba- of the measures which had been pursued with rd to America in the warmest terms; moved addressing the king to recal the troops from ton; predicted, that if ministers went on in way they had done for some time, they would te the crown not worth the king's wearing; t the kingdom was undone, &c. All his elo- quence, however, proved ineffectual; adminis- tration was determined to force the Americans into sion, and his motion was rejected by 68 to

Lord North now presented the papers which l called for by the minority; but left the lication of particular names should prove de- nential to individuals, only such parts as adm- ration thought proper for public inspection re laid before the house. This was complained but to no purpose; and the papers in their itulated state, were laid before a committee of whole house. In the mean time petitions a- iust coercive measures with America had n received from most of the trading compa-

nies of the kingdom; which, though highly dis- pleasing to administration, could not be absolute- ly rejected, though it was fully determined not to yield to their requests in the smallest degree. A committee was therefore appointed to take them into consideration, which was not to take place until the American affairs were also considered. The reason assigned was, that the consideration of commercial matters ought not to interfere with those of the political kind; each being sufficiently embarrassed without any other. This delay of hearing these petitions was supposed to be an absolute rejection of them; and so it proved to be, the committee to which they were consigned being humorously called the *committee of oblivion*. The merchants of London, however, drew up a paper, in which they denied the distinction estab- lished by ministry. They affirmed that the con- nection between Great Britain and America was chiefly of a commercial nature, and that the ma- nifold regulations adopted for the mutual prospe- rity of the colonies and of the mother country formed the great political chain which united them to one another. Questions of commerce and po- licy, therefore, with regard to them, ought never to be divided, but examined jointly, and could never be thoroughly understood if considered in any other way. This remonstrance was seconded by all the powers of opposition; but adminis- tration had already determined what line of conduct they were to follow, and therefore wished to hear as little as possible on the subject. "War (says Dr Andrews) was now the word; and notwith- standing no weightier reason could be given, for not attending to what the merchants had to say, than this very determination, yet that was the very motive that impelled ministers to refuse them a hearing, lest these should make it appear how unwise it was to precipitate the nation into such a measure." But though administration were now fully determined upon a war, and therefore wish- ed to be troubled with as few objections as pos- sible, they were by no means deficient in argu- ments for the defence of their conduct. They al- leged that the petitions were principally the work of a factious party. The advantages accruing from the American trade were owing to the dependent situation of the colonies, who aimed at shaking off entirely the superiority, which the mother coun- try had till now exercised over them without the smallest complaint. The advantage of the mer- chants themselves (they said) was consulted by maintaining that superiority; as they would be the first to feel the bad consequences of its being lost. War and its consequences are no doubt very terrible, but the greatest evil that can befall a tra- ding nation is the loss of its commerce; and were the Americans to persist in their course for a few years longer, this consequence must inevitably ensue. It was besides insisted, that though admin- istration were to yield the present contest, the warmest advocates for America could not pretend to say what would be the last of its demands. The Americans aimed in reality at the repeal of what- ever appeared obnoxious to their immediate inter- est: But that and their real interest differed very much. The greatest political evil that could be- fall them was to be deprived of the political and commercial

commercial support they received from Great Britain; and to this they must ultimately submit, if they should ever succeed in the pursuit of the *delusive phantom of independence*. In short, administration insisted, that the Americans were not to be reclaimed by concessions. Mercantile people indeed might imagine so, from the facility with which concessions would be made, and the speed with which tranquillity would be restored. But tranquillity procured in this manner would last no longer than till the colonies, unfettered by any regulations, perceived, or imagined they perceived, the benefit of dealing with other countries, and carried their own commodities wherever they thought proper. This was the point at which they incontestably aimed, whatever they might pretend to the contrary; for, notwithstanding the boasts they made of the vast business transacted with Britain, it was well known to arise from the immense credit they were indulged with there, and which they could not expect elsewhere. The honour and interest of the nation were now also said to be at stake. The British had often taken up arms for matters of less consequence; why then should they now hesitate, when honour and interest both called upon them for the most vigorous and speedy exertions? Formerly it was the custom of the merchants to second the wishes of ministry in this respect, instead of opposing them. The inconvenience of suspending their profits for a time must be submitted to, and their enemies would experience as many if not more of the same kind; and it would be unworthy of the character they had so long sustained to yield to indignities for the sake of profit. The losses above mentioned, however, would be but trifling in comparison of those that would follow in time to come, should Britain for want of spirit give up the assertion of her just rights. This was a policy hitherto unknown in Britain, which had heretofore been noted for the ardour and celerity with which they were maintained. The end of this altercation was, that the motion in favour of the merchants petitions was rejected by 250 to 89. This point, however, was no sooner discussed, than a violent debate arose about the petition of congress to the king, which had been delivered, and by him referred to parliament. It was argued by administration, that no petition could be received from the CONTINENTAL CONGRESS, which was no legal body, and it would be admitting their legality to receive a petition from them; the general assemblies and their agents were the only lawful representatives of the colonies, and none else could be admitted. Opposition replied and argued as much as possible, but to no purpose; and, after an ineffectual struggle, the petition was finally rejected by 228 to 68. In the mean time a conciliatory plan was prepared by the earl of Chatham, which was presented on the 18 Feb. 1775. The intent of this bill, he said, was to settle the troubles in America, and to assert at the same time the supreme legislative authority and superintending power of Great Britain over her colonies. This was to be done by their acknowledging the supremacy of the British legislature and the superintending power of parliament. No taxes were to be levied in America but with the free consent of their assemblies. It asserted

a right in the crown to keep and station a military force established by law in any part of its dominions; but declared, that it could not be legally employed to enforce implicit and *unlawful submission*. A congress might also be held, in order to recognize the supreme sovereignty of Great Britain over the colonies, and to settle, at the same time, an annual revenue upon the crown, disposable by parliament, and applicable to the exigencies of the nation. On complying with these conditions, the acts complained of by congress were to be suspended, with every other measure pointed out as a grievance, and the constitution of their governments to remain as settled by their charters. This bill was, however, deemed once totally inadmissible, on account of its *sharp partiality to America*, by the various concessions it enacted, and particularly by empowering the colonies to assemble in congress; a measure which of all others, was at that time the most offensive, and supposed to be the most injurious to the British interests. Lord Chatham was by no means sufficient in arguments in support of his favourite plan; but these, though supported by all the powers of eloquence, proved unsuccessful; the proposal being rejected by 61 to 31. So determined were the majority in giving this an entire rejection that it was not even permitted to lie upon the table; which, however, may be considered as a piece of indignity offered to that great man, proceeding rather from the influence of the opposition party, than from any real conviction of the impossibility of the plan he proposed. A petition next presented to the house of commons by the proprietors of estates in the West India islands representing their alarm at the association of the Americans, and their intended stoppage of trade with the British islands; the situation of which they said, would be very calamitous, if the all in question were not immediately repealed. The trade of these islands was at that time of the most extensive nature. All quarters of the globe were concerned in it; the returns centred in Britain, and were an immense addition to its opulence, inasmuch that the British property there amounted to no less than 30 millions Sterling. But the West Indies, however wealthy, did not produce the necessities of life in sufficient abundance for their inhabitants. Large importations were continually wanted, which could only be supplied from North America; and were they to be cut off from a communication with that continent, they would shortly be reduced to the utmost distress. Such was the substance of this petition, to which no more attention was paid than had been to the rest. Administration represented the petitions now as the contrivance of faction; and said, that however inconvenient the coercive measures might be, they ought not to be retarded by the consideration of any temporary losses. As it was necessary, however, to let the nation know the ultimate resolves of administration respecting America, it was at last done by Lord North's long speech, in which the most remarkable circumstances relating to the dispute were enumerated. He asserted, that the universal fermentation, then prevailing in America, proceeded from the *unjust* use to dispose them against the ruling powers in Britain;

in; and that, notwithstanding all their complaints, the public charges born by individuals in America were, on the strictest computation, not more than 1 to 50 when compared with what was paid by individuals in England. Nothing, therefore, but a settled determination to quarrel with the parent state could induce the Americans to persist in their disobedience to the lawful injunction laid upon them, which were neither injudicious nor oppressive; but on the contrary, framed in all possible lenity, and counterbalanced by advantages which were not possessed by Britain. It was therefore a spirit of resistance which animated America, and not a discontent at oppression which had no existence. For this reason he moved to the house to send a great force to America; and to pass a temporary act, suspending the foreign trade of the different colonies of England, particularly the Newfoundland fishery, until they should acknowledge the supreme authority of the British legislature, &c. upon which restrictions should be taken off, and their grievances, if any such there were, redressed. In England, they said, was justly singled out on this occasion, as being the most guilty of the whole. The others, as less faulty, it was said, would yield with less compulsion; but the question now was simply, Whether we would ever abandon all claims on the colonies, and only give up the advantages arising from our regnity, and the commerce dependent on it? Whether we should resort to the measures incessantly necessary to ensure both? An address now carried, which, in the ideas of opposition, amounted to an absolute declaration of war. The consequences, therefore, were pointed out in the utmost freedom, and the charge of the alliance fixed on the province of Massachusetts denied. The people there, they said, had nothing but what the constitution allowed; they had resisted arbitrary measures, and the exiles so frequently set them at home were sufficient to justify their conduct. The appellation of rebels was dangerous, and might better be avoided; it would only serve to render them desperate, and inspire them with a determination to retaliate. The last, from an apprehension that their lands and properties were forfeited. This last consideration, however, was made very light of by the opposition. Great stress, they said, was laid on the union of the colonies, but a very little would show with how much impropriety the principles on which they were associated were self-denying to be supported by human nature, were too inimical to the interest and feelings of individuals to bind them long together. In respect to this union of the colonies might be regarded with indifference and even contempt. The soldiers of America, it was said, were no soldiers; they were averse to military discipline, and incapable of subordination; they were of a slothful spiritless disposition; unclean, liable to sickness, and easily overcome by fatigue. Such people as these would never face a British army; and a very small force would be necessary to put an end to all their projects of independence. Such are the principal arguments for and against this resolution, which was carried by 296 to 206: but

so important was the subject of it deemed by the minority, that a motion was made for recommitting it, on account of the consequences that would probably result from the prosecution of the measures recommended. A very long and violent debate ensued; the event of which was, that administration contended as usual for the necessity of enforcing obedience with fire and sword. The Americans, they said, were become incorrigible through forbearance; lenity was a subject of derision among them, and was imputed to imbecility and fear; they imagined themselves able to abolish the sovereignty of Britain in that country, and were now resolved to do it. It was therefore incumbent on every native of Britain in such a case to stand forth and vindicate the interest and glory of his country; and it was the duty of parliament and ministry, to call forth the whole spirit of the nation to a contest in which every thing dear to them, both in their public and private capacities, were so deeply concerned. In this, and some former debates, the danger of being involved in foreign wars on account of the colonies was insisted on; but this was considered by administration as improbable. It was hardly to be imagined, said they, that foreign powers would behave in a manner so very impolitic, as to encourage rebellions in other colonies, which might, in a very short time, become precedents for imitation in their own. The number of friends to government in America was likewise very much relied upon. A proper reinforcement to the troops already there would encourage those to declare themselves, who were at present too timid to avow their sentiments: these, if duly supported, would be found to be no inconsiderable number; and when added to the forces stationed among them, would undoubtedly counterbalance the power of the malecontents. This project of arming the Americans against one another was reprobated by opposition more than all the rest. The address itself was a measure replete with barbarity as well as imprudence; tending to put arms in the hands of every man throughout the continent, who suspected the designs of the British administration, and to expose to ill usage and ruin every person who was known, or supposed, to be a friend to Great Britain. The Americans were said to aspire at independence; but if any thing could bring this about it would be the conduct of ministry. The most obedient and loyal subjects cannot have patience for ever under a tyrannical government. They will undoubtedly rise at last and assert her rights; and those who style them rebels on that account ought to remember, that oppression not only produces but justifies resistance. It had always been believed by the Americans, without any contradiction from Britain, that internal taxation in America belonged to the assemblies of the colonies, and to them only. There were opinions in all nations, which the legislature would respect, while they produced no bad consequences. This opinion ought not therefore to have been attacked at such an improper season, after having been virtually recognized by the repeal of several acts, and approved by some of the most learned and intelligent people in the kingdom. It was the greatest misfortune that could

could befall a state, when its rulers endeavoured without any apparent necessity, to alter the system and maxims of governing long adopted, and the utility of which had been confirmed by experience. This was, however, the case with Britain. The mildness and benignity, which was wont to direct the measures of former ministers, was now laid aside for severity and imperiousness; while implicit obedience was imposed upon the colonists, as the only condition by which they could purchase peace. The aspersions of cowardice, so largely thrown upon the Americans by the ministerial party, did not pass unnoticed. It was observed, however, that were these ever so just, the very nature of their country would fight for them.—By this alone our military enterprises would be retarded and impeded in a considerable degree; while the sinews of war would undoubtedly be greatly relaxed, as the suspension of such a considerable commerce as that of our colonies could not fail to be severely felt. Besides all this, the views and principles of ministers were attacked in the most violent manner. They were laid to be reviving the old exploded doctrines of hereditary right and passive obedience.—They required the Americans to submit unconditionally to the will of Great Britain, for no other reason but because she was the parent state; but if no better reason could be produced, they could not be justly blamed for their disobedience. The ties between Great Britain and her colonies, however, were of a far more noble as well as more binding nature, than even origin and consanguinity. These ties were the constitution transmitted from Britain, and the brotherly assistance hitherto afforded them by Englishmen; and which ought to render the name dear to them. While these ties remained unviolated, there was no room to complain of their behaviour; but they would never submit to despotic authority in Englishmen more than in any others. Such unwarrantable principles rendered it no longer a question, whether the measures of administration should be considered, but whether the ministers themselves ought not to be deprived of the power they exercised so constitutionally? And the question was not now between Great Britain and America, but, whether we should give up our colonies or our ministers? Language of this kind excited the indignation of the ministerial party to a very high degree. They now charged the minority in very plain terms, with the guilt of all that had happened. A factious republican spirit, they said, was gone forth; by which every person who wrote or spoke on the American cause was actuated; and which had not only induced the Americans to commence a rebellion against the parent state, but had filled the house with incendiaries. The final issue of the dispute was, that the recommitment of the address was lost by 288 to 109. The debates were the most violent that had ever been known in the British parliament; and so important was the subject reckoned, that not only the natives of Britain, but even the foreign ministers in London, watched the motions of administration with the utmost anxiety, as justly considering it a point which might probably give a new face to the affairs of *all Europe*. All these victories of administration

were not sufficient to prevent new enemies from starting up. Petitions had been preparing by the London merchants trading to America, and from those concerned in the West India trade, to be presented to the house of lords. This task was undertaken by the marquis of Rockingham, but he was prevented by a previous motion in favour of the address. A long and violent debate, however, ensued concerning the necessity and propriety of receiving them. The papers on which the address had been founded were said to be partly and mutilated, for which reason the house ought to pay the greater regard to the representations of the merchants; whose testimony, as persons deeply and essentially interested in bringing truth to light, might be depended on with much greater safety. It was urged, that they earnestly desired to be heard, before the house took any final determination with regard to America; a refusal would amount to a public declaration, that parliament was resolved to oppose the sense of the petition, right or wrong; and such treatment in every respect unwarrantable, and no less contrary to sound policy than to equity and good manners. All these representations, however, in no weight with administration: they affected no sorrow at being obliged to declare that the petition could not be received consistently with the interest of the kingdom; they put the merchants' mind, that the American proceedings threatened fatally to diminish the commercial greatness of this kingdom, in which case none would suffer so much as themselves; and they insisted the confidence ought to be put in the wisdom of parliament, as it was not doubted, that, by properly asserting the supremacy of the British legislature in the manner proposed, all those advantages which they were so anxious would be secured. They were therefore exhorted to submit to temporary inconveniences, which could not be avoided in the present posture of affairs, though probably they would not be of long duration. At the mean time matters went on from bad to worse in New England; so that it was soon perceived either that the friends of government in that colony did not exert themselves, or that they were far from being so numerous as had been imagined. To make their coercive plan the more effectual, therefore, it was judged necessary to extend it so that every individual of the colony should become sensible of the punishment. This, it was supposed, would be done by a bill for restraining the four provinces of New England from commerce with Great Britain, Ireland, or the British West India islands; and prohibiting them from carrying on the fishery at Newfoundland. The reasons given for this were in substance the same with those for the others; and indeed both parties had now so much exhausted their arguments, that very little new matter was left for either. Every step taken by ministry, and every proposal made by them, however, produced a violent debate; and though they constantly gained the victory, it was not without the mortification of hearing their principles and conduct reprobated in the most opprobrious manner. In this instance the bill was carried by 261 against 85.

(96.) ENGLAND, HISTORY OF, UNTO THE PRESENT

ENDING OF THE AMERICAN WAR. The petitioning bill was no sooner carried, than a petition was presented against it, by the London merchants concerned in the American trade, setting forth the danger that would accrue to the fisheries of Great Britain from such a prohibition. From evidence brought in support of this petition appeared, that ten years before the American war had been in such a flourishing state, that four provinces of New England alone employed near 46,000 ton of shipping and 6000 seamen; that the produce of their fisheries in the foreign markets amounted in 1764 to upwards of 5000. Since that time they had greatly declined; and what rendered the fisheries particularly valuable was, that all the materials used in them, excepting only the timber for building the ships, and the salt for curing the fish, were purchased in Britain, and the neat proceeds of the sale were also remitted thither. It appeared also that it would not be practicable to transfer the fisheries to Halifax or Quebec, though ever such encouragement were given to either of those places; as they had neither vessels nor people to man them, and would never be able to procure supplies of seamen from New England, on account of the aversion of the inhabitants to the removal of these two provinces. Some other circumstances were likewise urged as strong reasons against this bill; particularly the commercial concerns of London with New England (to which city alone the colony stood indebted for 100,000 a million), and the bad consequences of it to the people of NANTUCKET, a barren island, lying off the coast of New England, about 15 miles long and 3 broad, containing about 6000 inhabitants, almost all Quakers. The natural produce of this island could not maintain 20 families; the industry of the inhabitants was such, that they kept 120 vessels constantly employed in the fishery, which they carried on in the north Atlantic to the coasts of Africa and Brazil, and even as far as the Falkland islands and the shores of a Magellanica. These people, it was said, it undoubtedly to be exempted from the commercial duties, as a reward for their industry and obedience. Their case indeed was so strong, that the administration, with all their obstinacy, were obliged to relax a little; and afford them the relief which had such just reason to demand. That the colony, however, in the main might prove ungrateful, another was presented by the inhabitants of Poole, the tenor of which was directly opposite to that of the city of London. In this petition it was set forth, that the restrictions proposed by the bill would not prove detrimental to the trade of the colony, which was fully able, with proper regulations, to supply the demands of foreign markets.

The advantage of the Newfoundland fishery was more than that of New England to this country, was, that it bred a great number of hardy men peculiarly fit for the service of the navy, and the New England seamen were, by act of parliament, exempt from being pressed. It appeared also from the examination of witnesses taken in support of this petition, that the fishery of Britain to Newfoundland employed about 1000 ships, amounting to 360,000 tons, and 20000 men. VIII. PART II.

shallops carrying 20,000 tons, and navigated by as many seamen. Each season produced 600,000 quintals of fish, and the returns at a moderate rate were valued at 500,000. This bill was debated with great animosity in the house of peers, and produced a remarkable protest, in which the measures of government were spoken of with great severity. "That government (said the protesting peers,) which attempts to preserve its authority by destroying the trade of its subjects, and by involving the innocent and guilty in a common ruin, if it acts from a choice of such means, confesses itself unworthy; if from inability to find any other, admits itself wholly incompetent to the end of its institution." They also reprobated in severe terms the assertion, that the Americans wanted spirit to resist, and that Britain would find them an easy conquest. Such language was represented as altogether void of foundation, and the mere effect of party spirit and resentment. It was also the more imprudent and unadvised, as tending in case of coercive measures, to slacken the care and solicitude with which they ought to be pursued, and to occasion remissness in those to whom they might be entrusted, from a persuasion that the enemy to be encountered was not to be feared, and could easily be overcome. The final resolution of reducing the colonies by force being now taken, it became necessary to make proper preparations for the purpose; and in this the conduct of administration was little less censured than in other respects. As the opinion, that the Americans were timid and incapable of becoming soldiers, prevailed greatly at that time, a force of 10,000 men was judged sufficient to reduce the province of New England to obedience. This was vehemently opposed by the minority. They insisted that the force was totally inadequate, and only calculated to produce expence to no purpose. The first impression, they justly observed, ought to be decisive, if possible; and to render it so, it was necessary to send such a fleet and army as might ensure the confidence of the public, and be certainly capable of surmounting all obstacles. Many of the friends of administration were of the same sentiments in this respect; and the only reason assigned for acting otherwise was an hope that the Americans would, upon more mature consideration, desist from their opposition. That they might the more readily be induced to this submission, lord North's conciliatory proposition was formed. By this it was enacted, that when the governor, council, and assembly of any of the colonies, should propose to make a provision for the common defence, &c. and if such provision should be approved of by the king in parliament, the levying or imposing of taxes on that colony should then be forborn, those duties excepted which it might be expedient to impose for the regulation of commerce; the neat produce of which should be carried to the account of the colony where it was raised. But this proposal, though highly extolled by the friends of administration, was no less reprobated by the minority than the others had been. It was said to be insidious, and calculated for the purpose of raising a revenue, which was now said to be the object of ministers. There was no effect-

nal difference between the present and former modes of taxation. The colonies were as effectually taxed without their consent by requiring them to pay a stated sum, as by laying a number of duties upon them to the same amount. There was besides a capital deficiency in the proposal, viz. that no sum was specified; so that the Americans were left totally ignorant of what the demands of Britain might be. After a long debate, however, the question was carried in favour of administration by 274 to 88. The like fate attended a petition to the throne from the island of Jamaica. Instead of relaxing any thing of their severity, the ministry now included the southern colonies in the restrictions laid on New England. Still, however, the petitioners were indefatigable in their endeavours to be heard. The West India merchants and planters seconded their last petition, by a detail of circumstances relating to the British islands in that part of the world. This affair was conducted by Mr Glover, a gentleman equally celebrated for his literary talents and commercial knowledge. From his investigations it appeared, that, exclusive of the intrinsic worth of the islands, their stock in trade and other property amounted to no less than 60 millions; the exportation to Britain had of late been near 200,000 hogshheads and puncheons of sugar and rum, amounting to no less than four millions in value; the direct revenue arising from which was 700,000*l.* besides that which accrued from the collateral branches depending upon it. All this, however, was urged in vain. Conciliatory proposals were made by Mr Burke and Mr Hartly, but they were rejected by great majorities. These proposals, indeed, instead of serving the cause they were meant to promote, did the very reverse. A dread was entertained of the consequences which might ensue from the republican opinions now so prevalent in the colonies, and all partiality towards them was looked upon in such a criminal light, that their opponents became deaf, on many occasions, to the voice of reason and humanity when urged in their behalf. On the other hand, the favourers of America, urged on by a furious zeal, and even resentment against those whom they looked upon to be promoters of arbitrary measures, erred equally in their opposition to ministry. This violent party spirit appeared not only among the people at large, but broke forth with the utmost fury in parliament, where the debates often resembled the railings of Billingsgate, rather than the deliberations of the first assembly in a great and powerful nation. In this temper of mind it is no wonder that the state of affairs was scarce ever truly represented by either party. Government continued to enact new laws, now in vain, against the Americans; and their antagonists opposed these in a manner similar to what has been already related. Other petitions were presented and treated with neglect. The increase of union and preparations for war among the colonists were by the ministerial party treated as the mere commotions of an headstrong mob; and by the other as an association of an injured and virtuous people, who were about to found a mighty empire in the west, while Britain was to

sink in utter disgrace and contempt by their secession, without taking any account of their exploits in the field, which could not fail to equal those of the heroes of antiquity. On the same principles, the event of the skirmish at Lexington was magnified by the one into a "disgraceful defeat" on the part of the British; and by the other treated with absolute unconcern, as if no regard whatever was to be paid to it, nor any influence drawn from thence concerning the issue of the war in general. Thus also the battle of Bunker's Hill, and all the transactions of the year 1775, were unfairly stated by both parties; and the only consequence ensuing from these misrepresentations was the inflaming to a violent degree the resentment betwixt the two parties; one of which depressed the Americans to the rank of consummate poltroons, while the other raised them almost to that of demigods.

(97.) ENGLAND HISTORY OF, UNTIL THE CAPTURE OF GEN. BURGOYNE AND HIS ARMY AT SARATOGA. While these altercations continued to agitate the minds of the superior class of people in Britain, the middle and lower ranks remained in a kind of indifference, or rather were against the proceedings of ministry. This opposition could not indeed influence the councils of the nation, but in other respects it proved very troublesome. The levies were obstructed, the recruiting service was never known to proceed so heavily; numbers of people not only refused the usual proffers, but even reprobating the rank in which they were solicited to engage. Before this, several officers of high rank showed a great aversion to the service. Lord Effingham, who had distinguished himself by his opposition to ministerial measures, resigned the command of his regiment, rather than fight against the cause he had espoused so warmly. His example was followed by that of several other officers; and this step conferred upon them a considerable loss of popularity, it excited in the minds of many an equal degree of resentment. Lord Effingham, in particular, received the public thanks of the cities of London and Dublin; both of which showed an extreme aversion to the commencement of hostilities with America. The same after the affair at Lexington, framed a resolution and petition, animadverting in the most severe manner on the ministry and parliament; and it was not without the greatest difficulty, that the more moderate party procured one to be drawn up, under the name of an "humble petition," couched in less reprehensible terms. At the mean time several inconveniences began to be felt in different parts of the nation. The suspension of the sale and purchase of negro slaves in the West Indies and in North America, and the prohibition to export arms and gunpowder, greatly impeded the African trade from Bristol and Liverpool. In consequence of this, a great number of ships which formerly sailed from these ports had been laid up, and near 3000 sailors belonging to Liverpool dismissed from service. The situation soon rendered them riotous; and it was not without the assistance of the military that they were quelled. These distresses, however, were

o impression on administration; who having laid it down as a maxim, that the subjection of America was the greatest political good that could happen to Britain, were, in a consistency with their own principles, obliged to overlook every disaster that might happen in the mean time, as a temporary inconvenience, which ought not to be regarded in the prosecution of a great object. It was far otherwise with the generality of the nation, who felt the present inconveniences severely, while the subjugation of America presented them with no solid hope for an equivalent. It was with the utmost satisfaction, therefore, that they received the news of Mr Penn's arrival in 1775, with a new petition from the congress to the king; after which he was to give it to the public. Their expectation, however, was soon disappointed. The petition was delivered to lord Dartmouth on the 1st September; and in three days it was replied, that no answer was to be given. This laconic procedure excited no small surprise, as it was universally allowed that the language of the petition was respectful, and that it expressed the highest desire of peace and reconciliation. Lord Dartmouth's answer, therefore, could not but be considered as a final renunciation of all friendly intercourse with the colonies, and which would drive them into a connection with foreign powers; a resource at which they themselves had hinted when they first took arms. It was also thought not only to be indelicate in itself, but very ill timed, and not at all consistent with the situation of the affairs of Britain at that time. On the other hand, the friends of administration insisted, that the petition deserved nothing that could in a consistency with the dignity of the British empire be taken any notice of. Instead of professing any repentance for their own conduct, they had offered stipulations, and even required concessions on the part of Britain. It was likewise said, that fear had a share in framing the proposals now held out. The Americans were very sensible, that though the first steps taken by Britain had not answered the purpose, much greater efforts would quickly follow; and that, without being allowed some time, it was impossible they could bring their matters to bear. The petition, therefore, might be considered as written with a view to procrastinate matters, which was by no means admissible on the part of Britain. The colonies were already well apprized of the conditions on which they could be restored to favour; and had it at any time in their power to put a stop to the operations of war by accepting these conditions; but it would be imprudent to stop the military preparations upon such an uncertain expectation as the petition from congress held out. It was also plain, that a great majority of the nation approved of the measures of government; for addresses were received from all quarters, recommending in the most explicit manner, a vigorous exertion against America. The rejection of this petition inflamed the minds of both parties more than ever against each other. The obsolete distinction of *Whig* and *Tory* was now revived, and that with such animosity, that Britain itself, as well as America, now seemed in danger of becoming a seat of civil

war. The *Tories* were accused as the promoters of these sanguinary addresses already mentioned. They were said to be the great misinformers of government; and the false representations they industriously procured from all quarters had contributed more than any thing else to inflame the animosity and produce the civil war. They were upbraided with their attachment to the Stuart family. England, it was said, had, through their machinations, been made a scene of blood in the last century; and had been perpetually tottering on the brink of ruin from the restoration to the revolution. At that time indeed the more sensible part of the nation, wearied out with perpetual attempts to enslave them, took the resolution of expelling an ill-advised monarch, whom nothing could prevent from pursuing their pernicious plans to his own ruin. But the *Tories* were an incorrigible race, who could not be cured even by experience; for though they had seen repeated instances of the mischief attending their plans, they adhered to them with as great obstinacy as if the greatest benefits had on all occasions accrued from them. Dissension at home and disgrace abroad had been the constant attendants of their councils; while the only objects they ever had in view were the establishment and propagation of their own tenets; for these alone they laboured, the honour and interest of the nation being entirely out of the question. These they would willingly sacrifice to the points abovementioned; and as an instance of the effects of their councils, the treaty of Utrecht was mentioned. Here, said their antagonists, the fruits of a triumphant war, carried on for 12 years, were lost at once by those feuds which the *Tories* occasioned, through their restless endeavours to compass their iniquitous projects. On the other hand, the *Tories* said that the *Whigs* were the genuine descendants of those republican incendiaries, who had in the last century overturned the constitution and desolated the kingdom. They pretended indeed to assert the liberty of Britain; but under this pretence they wished to engross all the authority to themselves, as might easily be proved by an impartial examination of their conduct in the unhappy times alluded to. In the present dispute the principal question was, Whether the king and parliament, when united, were to be obeyed or resisted? The *Tories* insisted that they were to be obeyed; the *Whigs* that they were to be resisted. The truth was, therefore, that there were two parties in Britain; the one of which was of opinion that the colonies owed obedience to Great Britain in all cases whatever, and that in case of refusal they ought to be compelled to obey; but the other, though it acknowledged the same obligation on the colonies, thought it was unadvisable to force it. The only constitutional method of deciding this question was by an appeal to parliament. That appeal had already been made, and parliament had determined on compulsion. The decision ought therefore to be considered as that of the voice of the nation; and were a parliamentary majority to be viewed in any other light, all things would fall into confusion, and no rule of government remain. The doctrines of the *Whigs* were also said to be inadmissible in sound policy.

policy. Authority, sovereign and uncontrolled, must always reside somewhere; and allowing every charge of bribery and corruption (which were brought by the other party most liberally) to be true, it were still better to be governed in some instances by such means, than to have no government at all. This must at last be the case were continual appeals to be made to the people; as they would undoubtedly be followed by perpetual broils at home as well as disasters abroad. To these violent bickerings at home, some very serious commercial misfortunes were now added. It had been represented as very probable, during the last session of parliament, that the bill for depriving the people of New England of the benefits of the Newfoundland fishery, would redound greatly to the interest of Great Britain, by throwing into her hands alone the profits which were formerly divided with the colonies. This expectation, however, proved totally void of foundation. The number of ships fitted out that year was scarcely greater than usual. The congress had also prohibited them from being supplied with provisions; so that not only those on board the ships, but even the inhabitants on the island of Newfoundland itself, were in danger of perishing. Many of the ships were therefore obliged to go in quest of provisions, instead of prosecuting the business on which they came. On the whole therefore, instead of any increase, the profits of the fishery suffered this year a diminution of near 500,000*l*. Along with this, some natural causes co-operated, which, by the more superstitious, were considered as the effects of divine wrath. A most violent and uncommon storm took place in these latitudes during the fishing season. The sea rose full 30 feet above its ordinary level; and that with such rapidity, that no time was allowed for avoiding its fury. Upwards of 700 fishing boats perished, with all the people in them; and some ships foundered, with their whole crews. Nor was the devastation much less on shore, as the waters broke in upon the land, occasioning vast loss and destruction. By these misfortunes, the general stagnation of commerce, and the little success that had hitherto attended the British arms, the mercantile part of the nation were thrown into despair. Petitions were poured in from all quarters, the contents of which were similar to those already mentioned, and their reception exactly the same. Ministers had determined on their plan; and the only difficulty was, how to put it in execution as quickly as they desired. For this purpose, application was made to the petty states of Germany, who are wont to hire out their forces, and who had frequently sent auxiliaries to Britain in former cases of exigency. At present, however, the scheme met with considerable difficulties, occasioned by the distance, as well as the danger of the mercenaries deserting. The princes were also alarmed at the appearance of losing so many subjects for ever; while the latter were no less startled at the proposal of being transported across the ocean into a new world, there to be exposed to all the miseries of war, with very little hope of ever seeing their native country again. Other resources, however, were devised, by calling in the assistance of the Hessians, and obtain-

ing from Holland that body of Scots troops which had been so long in their service. But in both these views administration were disappointed. All the states of Europe looked upon Britain with an invidious eye, though none so much as Holland and France; these being the two powers who had most reason to hope for advantage from the quarrel. A very strong party in Holland extended for the American interest. Pamphlets were daily published at Amsterdam in justification of the colonies: their case was compared with that of the Netherlands in former times; and they were exhorted to persevere in their claims against the pretensions of Britain. Her they represented as insatiably covetous of wealth and power, and desirous of seizing every thing she could. She was also taxed with being of a domineering disposition; and that, since her successes in the war of 1755, she had become intolerable, not only to her neighbours, but to the whole world: nay, that even during the war she had exercised an absolute sovereignty at sea, and openly avowed a right and title to rule over that element. But though these powers thus early expressed their hostile disposition towards Britain, it was otherwise with the princes of Hesse and Brunswick; by whom, and some other German princes of inferior note, a considerable number of troops were supplied. At the same time, that as many British forces as possible might be employed, large draughts were made from the garrisons of Gibraltar and Minorca, which were supplied in return with an equal number of men from the electorate of Hanover. In justice to the ministers, indeed, it must be owed, that they prosecuted the scheme they had undertaken with all possible vigour; inasmuch that the expences already began to occasion considerable alarm. This was owing, in the first instance, to the bad success of the British arms, which occasioned a demand on this country altogether unlooked for. It had always been supposed, that the British army would be completely victorious, or at least would remain so far masters of the field, that they could easily command what supplies of fresh provisions were necessary. Instead of this, they were now copped up in such a manner as to be actually in danger of perishing for want. The supplies, therefore, of necessity, were sent from Britain; and indeed the exertions for their relief were such as must give high ideas of the opulence and spirit of the British nation. For these troops there were shipped no fewer than 5000 live oxen, 14,000 sheep, with a proportionable number of hogs, immense quantities of vegetables, prepared with all possible care; 10,000 butts of small beer and 5000 butts of strong beer. Some little idea of the expences of these articles may be obtained from an account of what was paid for articles trifling in comparison of the above. For a regiment of light horse in Boston, 20,000*l*. were paid for oats, hay, and beans. The articles of vinegar, vegetables, and casks, at no less; and every thing else in proportion. The contingencies occasioned by military operations amounted to near 500,000*l*. The prodigious expences therefore, of maintaining an inconsiderable army at such a distance, could not fail to give a

unfavourable opinion of the war at large, easily raise suspicions, that even the treasures itain would not be able to defray the expense. One advantage, however, was derived from such immense profusion; the price of every was augmented; that of shipping particularly rose one fourth in the ton: and though the was made by contractors and their numerous slaves were complained of, the benefits which led to multitudes employed in the various branches of public business seemed in some measure to make amends for every thing. Misfortune, however, seemed now to attend every one in which Britain engaged. Some part of deed, in the present case, might be derived from mismanagement. The sailing of the transport was delayed so long, that their voyages were retarded. They remained for a long time wind-bound; after leaving port, met with such stormy weather, that they were tossed to and fro in the sea, till most of the live stock they had on board perished. After clearing the coast of England, their progress was retarded by a continuation of bad weather. They were forced by the violent winds from the coast of America into the ocean. Some were driven to the West Indies, where they were captured by American privateers, and a very few reached the harbour of Boston, their cargoes quite damaged, so that they were of little or no use. Notwithstanding the expense of supplies above mentioned, therefore, a contribution was set on foot for the relief of the prisoners, as well as of the families of those who were in the service. This was liberal on the whole, though many refused to contribute, from their disapprobation of the cause; and bitter complaints were made of want of economy throughout the American department. All this time the mutual animosities between the parties continued, the desire of peace was gradually extinguished on both sides. Each seemed to be of opinion, that the other would willingly ruin the nation if possible; a remarkable instance of which was the commitment of Stephen Sayre, Esq; banker (one of the sheriffs of the preceding year), to the tower for high treason. The accusation laid against him was no less than that of having formed a design to seize his majesty as he went to the house of commons: but the scheme itself, and the method in which it was to be executed, appeared both so ridiculous, that the prisoner was very soon discharged; after which he commenced a process against lord Rochfort for false imprisonment. With respect to the parliamentary proceedings during this period, very little can be said, further than that every measure of administration, right or wrong, was violently opposed. The employment of foreign troops, and admitting them into the fortresses of Gibraltar and Minorca, were severely censured, as being contrary to the rights of the people. Administration contended, that this only forbade the introduction of a foreign military power into the kingdom during peace; but that times were not peaceable, and the introduction of the troops was evidently with a view to suppress a rebellion. The force designed for the conquest of America was then declared to be inadequate to the purpose; but it was replied on

the part of ministry, that the design was to conciliate not to conquer. The force (25,000 men) was sufficient to strike terror; and though this should not instantly be produced, conciliatory offers would still be held out after every blow that was struck. In the mean time the Americans, sensible of the dangerous situation in which they stood, exerted themselves to the utmost to dislodge the British troops from Boston. This being at length accomplished in March 1776, they proceeded to put their towns in the most formidable state of defence; and actually repulsed Sir Peter Parker, at Charlestown: But they did not exert equal spirit in the defence of New York; where, besides losing the town, they received such a defeat, as threatened their affairs with total ruin. (See AMERICA, § 27.) In this view it appeared to the majority of the people in Britain. The successful campaign of 1776, was looked upon as so decisive, that the Americans were supposed to be incapable of ever retrieving their affairs. Opposition were embarrassed, and now almost reduced to the single argument of the interference of foreign powers, which they had often unsuccessfully used before. Besides this, indeed, the obstinacy of the Americans in refusing the offers of lord Howe, even at the moment of their greatest depression, seemed to be a very bad prelude. The strength of ministry, however, now became so decisive, that whatever they proposed was immediately carried. The number of seamen for 1777 was augmented to 45,000, and upwards of five millions voted for the expense of the navy, and to discharge its debt. The expenses of the land service amounted to near three millions, besides the extraordinaries of the former year, which amounted to more than 1,200,000; and though this vast profusion became the subject of much complaint and animadversion, the power of ministry silenced every opposer. But however administration might now triumph, their exultation was but of a short continuance. The misfortune of general Burgoyne at Saratoga, threw the whole nation into a kind of despair, and reduced the ministry to the greatest perplexity. See AMERICA, § 28.

(98.) ENGLAND, HISTORY OF, UNTO THE CAPTURE OF GRENADA AND ST VINCENT BY THE FRENCH. The ministry were now in no small difficulty how to raise a sufficient number of forces to carry on the war; but from this they extricated themselves by a masterly contrivance. This was the encouraging levies for government service by cities and private persons; and as the design was kept a profound secret before the Christmas recess, they were not disturbed by the clamours of opposition. The recess was purposely extended, to give time for the scheme to take effect; and before parliament met again it was actually accomplished, so that ministers could once more face their opponents without fear. Another and more weighty consideration, however, now occurred. The European states, in general, had long beheld the grandeur of Britain with an envious eye. The news of the disaster at Saratoga was therefore received among them, as those of the defeat of Charles XII. at Pultowa was, among the powers whom he had so long com-

manded. Of all these, the French, for obvious reasons, were the most active in supporting the Americans. Numbers of the young nobility were eager to signalize themselves in the American cause; and among the rest, the celebrated *marquis de la Fayette*. Impelled by an enthusiastic ardour in favour of the American cause, he purchased a vessel, loaded her with military stores, and sailed in her with several of his friends to America, where he presented his services to congress. From them he met with a most gracious reception, and was invested with a command, in which he lost no opportunity of distinguishing himself. Besides this nobleman, several other officers from France and Germany entered into the American service, and by their military talents greatly contributed to the exertions which the colonies were afterwards enabled to make. This assistance, however, would have been but trifling, had not the French court also interested itself in their behalf; for by the time, or very soon after, the news of general Burgoyne's disaster arrived in Britain, the celebrated *Dr FRANKLIN* had negotiated a treaty between the French court and the United States of America. Even before this time France had showed such an extreme partiality towards the Americans, as might have plainly indicated their design of ultimately assisting them in their national capacity. The encouragement given to the American privateers in all the ports of France had produced strong remonstrances on the part of Britain; and an order was at last demanded that all these privateers with their prizes should depart the kingdom. With this they found it necessary to comply at that time, lest reprisals should have been made upon their Newfoundland fleet, then out on the fishery. So many delays, however, were made on various pretences, that not a single vessel was dismissed from any of their ports. So far indeed were the French court from any design of this kind, that in July 1777, the whole body of merchants throughout the kingdom, were assured from government, that they might depend on protection in their trade with America. All this time the greatest preparations were made throughout the whole kingdom of France for war; so that the most judicious politicians were of opinion, that a rupture with that power should have immediately followed the commencement of hostilities with America, and for which, the behaviour of the former furnished abundant reasons of justification. Whatever might have been the motives of the British ministry, however, it is certain, that in defiance of probability, even when joined by the most acrimonious censures of opposition, they continued to pretend ignorance of any hostile intentions in the court of France, until that court of its own accord announced them, by a formal notification to the court of Britain in March, 1778. This was done in the most mortifying terms; for it was announced, not only that a treaty of friendship and commerce was concluded betwixt France and America, but Britain was insulted with being told, that the Americans were actually in possession of independency, as if the former had already exerted her utmost efforts without being able to reduce them. A merit was

also made of having entered into no commercial stipulations in favour of France exclusive of Britain. Nothing, therefore, could be more offensive; and though it could not decently be said that the part of the French monarch, that he was for war, yet his pacific intentions were covered in such haughty terms, that the whole could only be considered as a declaration of those hostilities which he pretended to avoid. Both parties now united in their opinion that a war with France was unavoidable; but they were not that reason any farther advanced towards a reconciliation. It must be owned, indeed, that the minority had now received very great promotion. They had from the beginning reproached the American war, and prognosticated its failure. In this they had been over-ruled, and the character of the Americans represented to such, as almost to preclude the idea of their being able to resist. They had resisted however, and by taking prisoners a whole army, and those predictions which had been so often treated with ridicule. The popular party had, without number, insisted in the most exact manner for some kind of concession towards America; but this had constantly been refused with unparalleled and inveterate obstinacy. They saw those very concessions offered to America after the defeat of Burgoyne, which, had they been granted in time, would have prevented all mischief. Added to all this, the expenses for the ensuing year had been hurried through the house before the Christmas vacation; the levies had been raised by subscription without consulting parliament at all; yet both these proceedings had been determined to be strictly legal and constitutional. Every inquiry into the measures of government had been frustrated; and one important state of the nation in general, which could not be absolutely rejected, was rendered ineffectual by delays and evasions. Lastly, they now saw the country involved in a foreign war with a nation well provided for all emergencies, while we supinely suffered them to go on, without making the least effort to put ourselves in a proper state of defence. For these reasons opposition thought that the ministry ought no longer to be troubled with the management of public affairs. And knowledge of the independence of America was now by many supposed to be the constitutional step that could be taken, which might be done with a good grace, and which we were unavoidably be obliged to take at last whether we would or not. By acknowledging this independence before they had time to enter into any five engagements with France, their trade would be open to all the world. This of course would lessen their correspondence with France, and keep them at liberty to form such connections as they thought most proper. The ministerial party, however, still insisted on vigorous measures, presenting it as a spiritless and disgraceful method to bend beneath the power of France, and to furnish forth the resources of Great Britain as sufficient to resist the efforts of all her enemies. The dishonour of leaving the American loyalists exposed to the resentment of their countrymen was also set forth in the strongest manner. Their

to be by far the greater number ; and it was evident that their loyalty ought to be rewarded by putting arms into their hands : Whatever the result of the experiment might be, we could not do them without exposing our reputation, and of the character of fidelity to our engagements, for which we had hitherto been so justly famed. Unanimity in the present case was easily insisted upon ; and when opposition commenced of some occult irresistible influence by the councils of the nation were directed, in spite of every suggestion of reason and argument, the charge was denied in the strongest manner, and ministers disclaimed every motive of conduct, excepting that of an internal conviction of its rectitude. Notwithstanding the violence of these altercations, however, the greatest sagacity and steadiness was manifested by the cool and deliberate part of the nation. The French were in the first place to excite a general terror by threatening an invasion. This was evidently impracticable, without their procuring the superiority at sea : yet as multitudes in the country were apt to be terrified by the very mention of a French invasion, orders were issued to draw out and embody the militia, which was composed of men in every respect as well educated and disciplined as any regular troops. It complained, however, that a French squadron of 12 ships of the line had sailed from Toulon without any obstruction, under the command of the count d'Estaing. Great apprehensions were entertained from the evident inferiority of our naval force, which might expose him to a total defeat, and the whole fleet of transports were taken or destroyed by the enemy. But never might have been the probabilities in this ; it is certain that either the fortune or conduct of this commander was such, that no exertion of any great consequence was ever performed by d'Estaing. That matters, however, might be in the best situation possible, addresses were made, for recalling of the fleets and armies from America, to station them in places where they might contribute more effectually to the defence of the kingdom. This was opposed not only by the opposition, but even by some of the most powerful members of opposition, particularly the lords of Chatham and Shelburne. The operations of the French in America, with the various events of the war, are related under the article AMERICA, § 30—33. Here we have only to notice that d'Estaing having failed in his attempt to destroy the British fleet at New York, and in assisting the allies in their attempt on Rhode Island, as well as having by other parts of his conduct greatly disgusted them, sailed for the West Indies, where he unsuccessfully attacked the island of St. Lucia. (See LUCIA, ST.) Being repulsed in this attempt, he sailed to the island of Grenada, where he was reduced, treating the vanquished in a cruel manner, (See GRENADA,) while a body of troops dispatched by him also reduced the island of St. Vincent.

9.) ENGLAND, HISTORY OF, UNTO THE COMMENCEMENT BETWEEN THE BRITISH AND FRENCH FLEETS, AND SUBSEQUENT TRIAL OF VICE ADMIRAL KEPPEL. The count d'Estaing was now

powerfully reinforced ; so that his fleet consisted of 26 sail of the line and 12 frigates. During the time he was employed at Grenada, admiral Byron with the British Squadron was accompanying the homeward bound West India fleet till out of danger ; after which he sailed with a body of troops under general Grant for the recovery of St. Vincent ; but before they could reach that island, intelligence was received of the descent at Grenada. On this they steered directly for that island, where they encountered the French fleet without hesitation, notwithstanding the great superiority of the latter. At this time the French squadron amounted to 27 sail of the line and 7 frigates ; while that of Britain consisted only of 22 ships of the line, and one frigate. The British admirals, Byron and Barrington, endeavoured to bring the enemy to a close engagement, but this was as studiously avoided by d'Estaing ; and such was the dexterity and circumspection with which the latter conducted matters, that it was only by seizing the transient opportunities of the different movements occasioned by the wind and weather, that some of the British ships could close in with their antagonists. Even then, the engagement was carried on upon such unequal terms, that the British ships were terribly shattered. For some time capt. Collingwood, Edwards, and Cornwallis, stood the fire of the whole French fleet. Captain Fanshawe of the Monmouth, a 64 gun ship, singly threw himself in the way of the enemy's van to stop them. Several of the British ships forced their way to the very mouth of St. George's harbour on the island of Grenada ; but finding it in the hands of the French, an end was put to the engagement ; nor did the French try to renew it, though the British ships had suffered very much. The count d'Estaing now having received fresh reinforcements, set sail for America, after conveying the homeward bound fleet of French merchantmen in their return from the West India islands. His disastrous attempt on the town of Savannah, with the subsequent discord betwixt him and the colonists, are related under the article AMERICA, § 30. Here we have only to notice, that thus the fears, which had been excited by the superiority of the French in the West Indian seas, were effectually dissipated. The islands of DOMINICA, ST. VINCENT, and GRENADA, were indeed lost ; the first being taken by the marquis de Bouille, governor of Martinico, and the two last by d'Estaing. (See these articles ;) but these successes were balanced by the failure of the French commander in every other enterprise ; by his terrible disaster at the Savannah ; and by the acquisition of St. Lucia, which was taken in 1778 by admiral Barrington and generals Prescott and Meadows. See LUCIA, ST. In other parts of the West Indian seas also the honour of the British arms was very effectually supported by the bravery and vigilance of the commanders on that station. Here admiral Hyde Parker, assisted by admiral Rowley, kept the enemy in continual alarm, and intercepted the trade of the French islands in such a manner as greatly distressed them. Three large frigates dispatched by count d'Estaing, after his failure in America, were taken, and a great part of a convoy seized or destroyed in sight of M. de

la Motte Piquet's squadron in the harbour of Port Royal at Martinico, the admiral himself having narrowly escaped. He had sailed out of that harbour, to favour the escape of the convoy, which having partly effected, he withdrew; but was pursued so closely, that he had scarcely time to shelter himself under the batteries on shore. These successes, which happened in 1778, 1779, and beginning of 1780, kept the event of the war pretty much in an equilibrium on the western seas and continent; but in the mean time the most unhappy dissensions prevailed through every department of the British government in Europe. Among other charges brought by the members in opposition against ministry, that of neglecting the navy had been one of the most considerable; nor indeed was the charge without foundation. Without a fleet, however, it was now impossible to prevent an invasion. At this time, indeed, the fleet was in a very weak condition, but the valour and experience of the officers seemed in some measure to compensate that defect. The chief command was given to admiral Keppel, who had served with uncommon reputation during the last war. Admirals Sir Robert Harland and Sir Hugh Palliser served under him, both officers of undoubted courage and capacity. Arriving at Portsmouth about the end of March 1778, admiral Keppel exerted himself with so much diligence, that exclusive of those ships which it was found necessary to dispatch to the coast of North America under admiral Byron, a fleet of 20 sail of the line was got in complete readiness by the beginning of June, and ten more in a forward state of preparation. At the head of this fleet admiral Keppel sailed from Portsmouth on the 13th June, to protect the vast number of commercial ships expected from all parts of the world, and at the same time to watch the motion of the French fleet at Brest. On the arrival of the British fleet off the coast of France, two French frigates approached it, to make observations. These were the *Licorne* of 32 guns and the *Belle Poule* of 26. In consequence of a signal to give chase, the *Millford* frigate overtook the *Licorne* towards the close of the day, and requested the French captain to come under the British admiral's stern; upon his refusal, a ship of the line came up, and compelled him to come into the fleet. Next morning, the *Licorne* seeming by her motions to be altering her course, a shot was fired across her way as a signal for keeping it. Hereupon she discharged a broadside and a volley of small arms into the *America* of 64 guns that lay close to her, and immediately struck. This behaviour of the French captain was the more astonishing, as lord Longford, captain of the *America*, was at that instant engaged in conversation with him in terms of civility; but though such behaviour certainly merited severe chastisement, no hostile return was made. The *Arethusa* of 26 guns, commanded by captain Marshal, with the *Alert* cutter, was mean while in pursuit of the *Belle Poule*, that was also accompanied by a schooner, and the chase was continued till they were both out of sight of the fleet. On his coming up, he informed the French captain of his orders to bring him to the admiral. This being refused, the *Arethusa* fired a shot a-

cross the *Belle Poule*, which she returned with discharge of her broadside. The engagement thus begun, continued more than two hours with uncommon warmth and fury. The *Belle Poule* was greatly superior not only in number, but weight of metal; her guns were all 12 pounders, those of the *Arethusa* only six. Notwithstanding this inferiority, she maintained so desperate a fight that the French frigate suffered a much greater loss of men than the British. The *Alert* was wounded on board the former, amounted, on their own account, to near 100; on board the latter they were not half that proportion. Captain Fairfax in the *Alert*, during the engagement between the two frigates, attacked the French schooner, which being of much the same force the dispute continued two hours with great fury on both sides, when she struck to the British cutter. The *Arethusa* received so much damage, that she became almost unmanageable; the captain endeavoured to put her into such a situation, as to continue the engagement; but was unable to do it. Being at the same time upon the enemy's coast, and close on the shore, the danger of grounding in such a situation obliged him to act with the more caution, as it was midnight. The *Belle Poule*, in the mean time, stood into a small bay surrounded with rocks, where she was protected from all attacks; she had suffered much, that the captain, apprehending that she could not stand another engagement, had resolved, in case he found himself in danger of being run her aground; but her situation prevented such attempt; and as soon as it was day-light, a number of boats came out from shore, and landed her into a place of safety. Notwithstanding this great superiority on the side of the French, the action was extolled by them as a proof of English bravery, and the account of it received with much triumph as if it had been a victory. On the 18th of June, the day following the engagement with the *Belle Poule*, another frigate fell with the British fleet; and was taken by the admiral's orders, on account of the behaviour of the *Licorne*. The capture of these French frigates produced such intelligence to the admiral, as proved of the utmost importance, at the same time that it was highly alarming. He was informed that the fleet at Brest consisted of 32 ships of the line and 12 frigates. This was in every respect most fortunate discovery, as he had no more than 20 ships of the line and three frigates. The superiority of the enemy being such as to their skill nor courage could oppose in his present circumstances; and as the consequences of a defeat must have been fatal to this country, he thought himself bound in prudence to return to Portsmouth for a reinforcement. Here he arrived on the 27th of June, and remained till the ships from the Mediterranean, and the Spanish and Portuguese trade, and the former fleet from the West Indies, coming home, brought him a supply of seamen, and enabled him to go to sea again, with an addition of ten ships of the line. But still there was a great deficiency of frigates, owing to the great numbers that were at the American station, and the necessity of supplying the ships of the line preferably to all others.

the mean time, the preparations at Brest being fully completed, the French fleet put to sea the 8th of July. It consisted of 32 ships of the line, besides a large number of frigates: Count Orvilliers commander in chief. The other principal officers in this fleet were counts Duchasault, Guichen, and de Grasse; M. de Rochechoart, M. de la Mothe Piquet. The duke of Charlemon and heir to the duke of Orleans, commanded one of the divisions as admiral. On the 10th of July, the British fleet sailed out of Portsmouth three divisions; the first commanded by Sir Robert Harland, the third by Sir Hugh Palliser, the centre by Adam Keppel, accompanied by Mr. Campbell, an officer of great courage and skill. The French had been informed that the British fleet was greatly inferior to their own; which was true at the time when they received this information. Being yet unapprised of the reinforcement it was returned with, the admiral set at first in quest of it, intending to attack it while in the weak condition it had been represented to him. As the British admiral was equally ignorant on coming to action as soon as possible, they were not long before they met. On the 23d of July, they came in sight. But the appearance of British ships soon convinced the French admiral of his mistake, and he immediately determined to avoid an engagement so less cautiously than he had eagerly sought it before. Herein he was misled by the approach of night: All that could be done on the part of the British was to form the line of battle in expectation that the enemy would do the same. During the night the wind changed so favourably for the French, as to give them the weather gage. This putting the British out of the opportunity of forcing them to engage as he had proposed. During the space of 4 days, the French had the option of coming to action; but constantly avoided it. The British fleet continued the whole time beating up against the wind, with a resolution to attack them. But notwithstanding the vigour and skill manifested in pursuit, the British admiral had the mortification to see his endeavours continually eluded by the vigilance of the enemy, not to lose the least advantage that wind and weather could afford. The chase lasted till the 27th of July. Between 11 and 12 A. M. an alteration of wind and weather occasioned several motions in both fleets that brought them, unintentionally on the part of the British, and chiefly through the dexterous management of the British admiral, so near each other, that it was no longer in their power to decline an engagement. Both fleets were now on the same tack; had they so remained, the British, on coming up with the French would have had an opportunity of a fair engagement, ship to ship; which would hardly have failed of proving decisive; but this was a manner of combat quite contrary to the wishes of the French admiral. Instead of receiving the British fleet in this position, as soon as he found that an action was intended, he put his ships on the contrary tack, sailing in opposite directions, they might not fire at each other as they passed by. By

this means a close and sidelong action would be effectually evaded. As soon as the van of the British fleet, consisting of Sir Robert Harland's division, came up, they directed their fire upon it; but at too great a distance to make any impression: the fire was not returned by the British ships till they came close up to the enemy, and were sure of doing execution. In this manner they all passed close alongside each other in opposite directions, making a very heavy and destructive fire. The centre division of the British line having passed the rearmost ships of the enemy, the first care of the admiral was to effect a renewal of the engagement, as soon as the ships of the different fleets, yet in action, had got clear of each other respectively. Sir Robert Harland, with some ships of his division, had already tacked, and stood towards the French; but the remaining part of the fleet had not yet tacked, and some were dropped to leeward, and repairing the damages they had received in the action. His own ship the Victory had suffered too much to tack about instantly; and had he done it, he would have thrown the ships astern of him into disorder. As soon as it was practicable, however, the Victory wore, and steered again upon the enemy, before any other ship of the centre division; of which not above 3 or 4 were able to do the same. The other ships not having recovered their stations near enough to support each other on a renewal of action, in order to collect them more readily for that purpose, he made the signal for the line of battle ahead. It was now 3 P. M. but the ships of the British fleet had not sufficiently regained their stations to engage. The Victory lay nearest the enemy, with the 4 ships above mentioned, and 7 more of Sir Robert Harland's division. These 12 were the only ships in any condition for immediate service; of the others belonging to the centre and to Sir Robert Harland's division, 3 were a great way astern, and 5 at a considerable distance to leeward, much disabled in their rigging. Sir Hugh Palliser who commanded the rear division during the time of action, in which he behaved with signal bravery, came of course the last out of it; and in consequence of the admiral's signal for the line, was to have led the van in renewing the fight; but his division was upon a contrary tack, and was entirely out of the line. The French, on the other hand, expecting directly to be re-attacked, had closed together in tacking, and were now spreading themselves into a line of battle. On discovering the position of the British ships that were fallen to leeward, they immediately stood towards them, in order to cut them off. This obliged the admiral to wear and to steer athwart the enemy's foremost division; in order to secure them; directing, at the same time, Sir Robert Harland to form his division in a line astern, in order to face the enemy till Sir Hugh Palliser could come up, and enable him to act more effectually. The admiral, in moving to the protection of the leeward ships, was now drawing near the enemy. As Sir Hugh Palliser still continued to windward, he made a signal for all the ships in that position to come into his wake; Sir Hugh Palliser repeated this signal; but it was unluckily mistaken by the ships of his division as

an order to come into his own wake, which they did accordingly; and as he still remained in his position, they retained theirs of course. Sir Robert Harland was now directed to take his station ahead, and the signal repeated for Sir Hugh Palliser's division to come into his wake; but this signal was not complied with, any more than a verbal message to that purpose, and other subsequent signals for that division's coming into its station in the line, before it was too late to recommence any operations against the enemy. In the night, the French took the determination to put it wholly out of the power of the British fleet to attack them on a second time. For this purpose, three of their swiftest sailing vessels were fixed in the stations occupied during the day by the three admiral ships of the respective divisions, with lights at the mast-heads, to deceive the British fleet into the belief, that the French fleet kept its position with an intent to fight next morning. Protected by this stratagem, the remainder of the French fleet drew off unperceived and unsuspected during the night, and retired with all speed towards Brest: they continued this retreat the whole course of the following day, and entered that port in the evening. Their departure was not discovered till break of day; but it was too late to pursue them, as they were only discernible from the mast-heads of the largest ships in the British fleet. The three ships that had remained with the lights were pursued: but the vessels that chased them were so unable to overtake them, from the damages they had received in the preceding day's engagement, that they were quickly recalled; and the admiral made the best of his way to Plymouth, as being the nearest port, in order to put his fleet into a proper condition to return in quest of the enemy. The killed and wounded on board the British fleet amounted to somewhat more than 500; but the French, it has been credibly asserted, lost 3000. This appears the more probable, from the consideration that the French, in all their naval engagements, aim principally at the mast and rigging, and the British chiefly at the body of the ships. This action, whatever might have been the merit of the commanders, proved a source of the most fatal animosities. The bulk of the nation had so long been accustomed to hear of great and glorious victories at sea, that it was supposed a kind of impossibility for a French and British fleet to encounter without the total ruin of the former. The event of the last engagement, therefore, became an object of very severe criticism; and complaints were made, that, through the bad conduct of the blue division, an opportunity had been lost of gaining a complete victory over the French fleet. These complaints were quickly introduced into the public papers; and were carried on with a warmth and vehemence that set the whole nation into a ferment of the most violent and outrageous nature. The friends of Sir Hugh Palliser, the vice-admiral of the blue, were no less violent in the defence of his conduct than his opponents were in its condemnation; while those who espoused the cause of the admiral manifested no less determination, in accusing him of being the real cause of the escape of the French

fleet, through his disobedience of the signals and orders of his commander, and by remaining at a distance with his division, instead of coming to the assistance of the rest of the fleet. An accusation of so weighty a nature very much alarmed Sir Hugh Palliser. He therefore applied to admiral Keppel for a justification of his conduct; and required of him to sign and publish a paper relative to the engagement of the 27th of July; more in specifying as a fact, that he did not intend by his signals on the evening of that day to retreat the battle then, but to be in readiness for it the next morning. On the rejection of this demand Sir Hugh Palliser published in one of the daily papers a variety of circumstances concerning the engagement; reflecting severely on the conduct of the admiral, and prefacing the whole by a letter signed with his name. An attack so public and so detrimental to his character, induced admiral Keppel to declare to the admiralty, that unless Sir Hugh Palliser should explain this matter to his satisfaction, he could not, consistently with his reputation, ever act conjointly with him. This altercation happening before the meeting of parliament, was of course taken notice of when it met. In the house of peers an inquiry was demanded into the conduct of the commanders of the fleet on the 27th of July, on account of the declaration of admiral Keppel, that he would resume the command until such an inquiry had taken place. In the house of commons also it was urged, that as admiral Keppel had expressed a public refusal to serve in conjunction with Sir Hugh Palliser, the cause of such a declaration ought to be investigated. Admiral Keppel and Sir Hugh Palliser, who were both present in the house on this occasion, spoke severally to the point in question in support of their respective conduct. The issue of the contest between them was, that a motion was made for an address to the crown to bring Sir Hugh Palliser to a trial for his behaviour in the late engagement with the French fleet. In answer to this motion, Sir Hugh Palliser replied, in a speech of great warmth and vehemence, that he had already demanded and obtained a court-martial to sit on admiral Keppel whom he charged with having through his conduct caused the failure of success in that engagement. This intelligence was received with great astonishment in the house. It had been and still continued to be, the general desire of individuals of all parties, to heal this breach between the two officers, at a time when the service of both were so much needed. It was therefore with universal concern, the house was informed of the determination that had been taken, to bring admiral Keppel to a trial. The admiral, however, conducted himself on this occasion with a remarkable temper and coolness of expression. He acquiesced without reluctance, in the orders that had been laid upon him, to prepare for a trial of his conduct; which he hoped would not, upon inquiry, appear to have been dishonourable or injurious to his country, any more than disgraced to himself. The conduct of the Board of Admiralty in admitting the charges against admiral Keppel, and appointing a trial, was greatly con-

in the house. It was said to have been their duty to have laboured with the utmost earnestness, and exerted their whole official influence, to rattle this unhappy disagreement between brave and valuable men; the consequences of which they well knew, and ought to have obviated, by interposing as reconciliators, instead of promoting the dispute, by consenting to bring it to a judicial and public hearing. On the other hand, it was answered, that they could not, consistently with the impartiality which they owed every officer of the navy, refuse to receive matters of complaint relating to subjects of that department. They had no right to decide the merits of any case laid before them, but were bound to refer it to a court composed of equal officers, who were the only proper and competent judges of each others conduct in professional matters. In conformity with these principles, which were founded upon the clearest equity, they left the decision of the present altercation to the gentlemen of the navy; whose honour and integrity in all instances of this kind had never been called in question, and by whose verdict in every officer in that line of service should stand or fall. The arguments upon this subject were urged with great heat on both sides, and gave rise to a spirit of contention that diffused itself through all classes of society. The critical circumstances of the nation were forgotten, and the attention of the public entirely absorbed in this fatal dispute. The dissatisfaction that was excited upon this occasion among the upper class in the navy, appeared in a memorial presented to the king by 12 of the oldest and most distinguished admirals, at the head of whom was Lord Hawke. The conduct of Sir Hugh Palliser therein condemned without reserve; that of the admiralty itself was severely censured, as having established a precedent pregnant with the most ruinous consequences to the naval service of the kingdom. By the measure it had now adopted, that Board had submitted to become the instrument of any individual, who might be tempted by iniquitous motives to deprive the navy of its best and highest officers. It was a destructive violation, they said, of all order and discipline in the navy, to permit and countenance concealed, and afterwards precipitately acted, charges and recriminatory accusations of subordinate officers against their commanders in chief. It was no less improper and scandalous, to suffer men at once in high civil office, and in subordinate command, previous to their making accusations, to attempt to corrupt the judgment of the public, by publishing libels on their officers in a common newspaper, which acted at once to excite dissensions in the navy, to prejudice the minds of those who were to decide the merits of the accusation against the superior officer. The majority of those who subscribed this memorial were not only officers of the rank and importance in the navy, but unconnected with the opposition, and attached by various motives to the ministry. This evinced their conduct to have been uninfluenced by considerations of party. No business of any consequence

was agitated in either of the houses of parliament while the trial continued. It began upon the 7th of January 1779, and lasted till the 11th of February. After a long and accurate investigation of every species of evidence that could be produced, the court martial acquitted admiral Keppel of all the charges that had been brought against him, in the most complete and honourable manner. He was declared to have acted the part of a judicious, brave, and experienced officer; and the accusation was severely condemned. Both houses of parliament voted him their thanks for his eminent services, and the whole nation resounded with his applause. The city of London bestowed every mark of honour and respect upon admiral Keppel: while the resentment against his accuser was so strong, that it constrained him to retire wholly from public life, and to resign all his employments. But notwithstanding the high degree of national favour and esteem in which admiral Keppel now stood, he thought it prudent to resign his command, and withdraw from a situation, wherein he found himself not acceptable to those in power.

(100.) ENGLAND, HISTORY OF, UNTO THE EXTINCTION OF THE BOARD OF TRADE, AND DEFEAT OF MINISTRY, IN APRIL, 1780. The conduct of those who presided at the admiralty board now became an object of severe censure; and a number of facts were cited, to prove that its conduct for many years past had been highly reprehensible. The debates were uncommonly violent; and the resolution to condemn the conduct of the Admiralty was lost only by a majority of 34. Administration, however, still kept their ground; for though a second attempt was made, to show that the state of the navy was inadequate to the vast sums bestowed upon it, the point was again lost by much the same majority. The argument used by the ministry in defence of their conduct in this case was, that the ships now constructed were of a much larger size, and consequently much more expensive than formerly. But however they might be victorious in argument, it is certain that the conduct of the admiralty was far from giving general satisfaction. Not only admiral Keppel, but lord Howe, declared his resolution to relinquish the service while it continued under the direction of its managers at that time. Their resignation was followed by that of Sir Robert Harland, Sir John Lindsay, and several others; nay, so general was the dislike to the service now become, that no fewer than 20 captains of the first distinction had proposed to go in a body to resign their commissions at once; and were prevented only by the great occasion they saw there was for their services. This extreme aversion to the service produced a direct attack upon lord Sandwich, then first lord of the admiralty. But though in this as well as other cases the ministry were still victorious, they could not prevent an inquiry into the cause of our want of success in the American war. This was insisted upon by lord and general Howe, whose conduct had been so much reflected upon, that a vindication was become absolutely necessary. The inquiry was indeed very disagreeable to administration, and

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therefore evaded as long as possible. From the evidence of lord Cornwallis and other officers of high rank, however, it appeared that the forces sent to America were not at any time sufficient to reduce it; that the Americans were almost universally unfriendly to the British cause; and that the nature of the country was such, that the conquest of it must be excessively difficult. It appeared also, that the camp of the Americans on Long Island was so strong, that it could not have been attacked with any probability of success, after their defeat in 1776, without artillery and other necessary preparations. In every instance, therefore, the general's conduct was shown to have been the most eligible and judicious possible. These facts, however, being directly opposite to what the ministry wished to appear, counter evidence was brought in, with a view to invalidate the testimony of the very respectable witnesses above mentioned. In this business only two were examined, viz. major-general Robertson, and Mr Joseph Galloway an American refugee. From the evidence of Mr Galloway especially, it appeared that the conduct of general Howe had not been unexceptionable; that the greater part of the Americans were friendly to the cause of Britain; that the country was not so full of obstructions as had been represented; woods and forests being no obstructions to the marching of armies in as many columns as they pleased; that soldiers might carry provisions for 10 days on their backs, &c. Though no stress could be laid upon such extravagant assertions, proceeding either from ignorance or something worse; yet they answered the purposes of ministry, by procrastination, and by preventing the disagreeable truths abovementioned from striking the minds of the public too forcibly. The event of this inquiry, however, encouraged general Burgoyne to insist for an examination of his conduct; which indeed had been so unmercifully censured, that even the ministers began to think he had suffered too much, and that he ought to be allowed to vindicate himself. He was accordingly permitted to bring witnesses in his own behalf; and from the most respectable evidence it appeared; that he had acted the part both of a general and soldier; that the attachment of his army to him was so great, that no dangers or difficulties could shake it; and that even when all their patience and courage were ineffectual, they were still ready to obey his commands, and die with arms in their hands. A great number of other particulars relating to his expedition were also cleared up entirely to the honour of the general, and several charges against him were totally refuted. It appeared, likewise, that the Americans, far from being the contemptible poltroons they had been called, were intrepid and resolute. After the resignation of admiral Koppel, the command of the Channel fleet was bestowed, though not without violent debates, on Sir Charles Hardy, a brave and experienced officer, but now advanced in years, who had retired from the service with a design of never returning to it, being at that time governor of Greenwich hospital. The choice of an admiral to command this fleet was now of the greater importance, on account of the accession of Spain to the general confederacy

which took place this year. See SPAIN. The quarrel, like that with France, was formally initiated by the Spanish minister on the 17th of June, 1779; and like that too was attended with new but ineffectual proposals of an accommodation with America, and removal of the ministry. The imminent danger, however, to which the nation was now exposed, required a vigorous exertion, and various projects for its internal defence were laid before the parliament. The principal of these were the raising of volunteer companies to be added to the regiments of militia belonging to the counties where they were raised, and the augmenting the number of militia. The latter was judged unadvisable, on account of the necessity there would be to send a great number of irregular forces out of the kingdom, which would require new supplies of recruits; and the increase of the militia might prove detrimental to the recruiting service. The spirit and magnanimity played on this occasion, however, did the highest honour to the national character, and fully justified the opinion generally entertained of its valour and valour. All parts of the kingdom were actuated by a laudable zeal to concur in every measure necessary for its defence; large sums were subscribed by people of rank and affluence; and companies were raised, and regiments formed with such alacrity as quickly banished all apprehensions for the safety of the kingdom. On the other hand, the French, now thinking themselves secure of victory by the accession of the whole strength of Spain to their cause, began to execute their plans of conquest. A squadron was sent out under the command of the marquis de Vaudreuil, destined to reinforce the fleet commanded by D'Estaing. But before its proceeding, an attack was made on the British settlements of the rivers Senegal and Gambia in Africa. They were easily conquered; and on this occasion the French quitted their own island of Goree, which was very soon after taken possession of by Sir Edward Hughes in his way to the East Indies. These unimportant and distant conquests, however, being insufficient to produce any great effect, were resolved to strike a blow nearer home, by the conquest of Jersey and Guernsey. An attempt was accordingly made; but with so little success, that not a single man could be disembarked on the island they intended to conquer. The enterprise, however, proved indirectly of great service to the cause of America. A fleet of 400 merchant ships and transports were at that time on the point of sailing for New York, under the conduct of admiral Arbuthnot; but that officer, being informed of the attack on Jersey, thought it his duty to come to the assistance of the island rather than proceed on his voyage. This delay was followed by another, occasioned by bad weather; so that the fleet, which was laden with warlike stores and necessaries, did not arrive till the end of August, and several important enterprises projected by Sir Henry Clinton were of course laid aside. The French, in the mean time, determined to make an attempt on Jersey; but their squadron, long attacked by another under Sir James Watson, was driven ashore in a small bay on the coast of Normandy, under cover of a battery. There it

were pursued by the British commander, silenced the battery, took a large frigate of 18, with two rich prizes, and burned two frigates and several other vessels. Thus disintegrated, they next formed a project of invading Britain itself; and their preparations for it so formidable, that they excited a considerable alarm in Britain. Not only were the best in the French service marched down to the mouth of the British channel, but transports were sent in great numbers, and many general officers promoted, and the commanders named by government. A junction was formed betwixt the British and Spanish fleets, in spite of the endeavours used on the part of the British to prevent it; and then the allies made their appearance in the British seas with upwards of 60 ships of the line, besides a vast number of frigates and other small vessels. All this formidable apparatus, however, ended in nothing more than the taking of a single ship. They had passed the British fleet off Sir Charles Hardy in the mouth of the channel without observing him. Sailing then along the coast of England, they came in sight of Plymouth, where they took the *Ardent*, of 64 guns, which they retaken, without making the attempt to land. The British admiral made his entrance, without opposition, into the channel, on their quitting it, which a strong ebb-tide obliged them to do. He endeavoured to force them up the channel in pursuit of him; but great sickness and mortality on board their ships, as they gave out, obliged them to retire, in order to repair their ships, and recruit the health of their people. Thus ended the first, and indeed the latest exploit attempted by the combined fleets in the British seas. An annual parade of a kind was afterwards kept up, which was usually opposed on the part of the British; but he least act of hostility was ever committed between the channel fleets against each other. Though this ill success, or rather pusillanimity, left in the conduct of the combined fleets, such that the French themselves were ashamed of it, the appearance of them in the channel had occasioned much matter for declaration. All ranks, indeed, were now weary of the American war; and even those who had formerly been the most sanguine in defence of counter-measures, now began to be convinced of their folly. The calamitous effects produced by the continuation of these measures had by this rendered the far greater part of the people indigently averse to them; and the almost universal wish was, that the oppressive burden of the American war should be cast off, and the whole national strength exerted against those whom, on account of our frequent contests with them, we were accustomed to call our *natural* enemies, in which the very expression implies a satire upon our nature. For this purpose the national spirit continued to be exerted with unabated vigour. Funds were subscribed in the counties, and raised in raising volunteers; associations were formed in the towns, where the inhabitants devoted a considerable portion of their time in applying themselves to the use of arms. The East India company now forgot their quarrel with mi-

nistry, and not only presented government with a sum sufficient for levying 6000 seamen, but at its own cost added three 74 gun ships to the navy. Administration were not yet, however, weary of their plans, which they seemed inclined to prosecute, and did prosecute, as long as the nation would support them. The virulence of opposition, therefore, still continued; and every part of the kingdom seemed to imbibe their sentiments. Among other charges now brought against them was that of misapplying the national force:—100,000 men were employed for the internal defence of the kingdom; which being much more than sufficient for the purpose, ought therefore to have been distributed into places where it might have acted to advantage. The army of Great Britain, it was said, amounted to 300,000 men; the navy to 300 sail, including frigates and armed vessels; 20 millions had been expended on the service of the year 1799; and yet, with all this force and treasure, the utmost benefit that ministers could make was, that the enemy had hitherto been kept at bay, and not allowed to invade Great Britain. Nor were the charges less heavy in other respects. Veteran officers had been passed by, to make room for those of inferior merit. The discontents and miserable state of Ireland, (See IRELAND,) the losses of the West India islands, &c. were all put to the account of ministers; and it was said that the universal cry of the nation was for their dismissal. Their incapacity was now visible to every body; and it was a matter of universal surprise how they durst retain their places in opposition to the general desire of the nation. To all this, ministry replied in a resolute and determined manner, denying or refusing every circumstance; and at last, after violent debates, gained their point, of an address without any amendment proposing their removal, in the upper house by 82 to 41, and in the lower by 253 to 134. The enormous expences already incurred, however, and still necessary to be incurred, for the carrying on of the war, occasioned such a general alarm, that it was no longer possible to refuse compliance with some scheme of economy, or at least giving it a patient hearing. The duke of Richmond proposed that the crown should set the example, and moved for an address to this purpose; but the motion was lost by 77 to 36. The earl of Shelburne next undertook the discussion of the subject; and having, in a most elaborate speech, compared the expences of former times with the present, and shown the immense disparity, he proceeded to show the reasons. These were, that ministers formerly employed fewer persons, and obliged them to be content with smaller profits. One contractor supplied all the troops in America during the last war, and his agreement was to furnish a ration of provisions at 6d.; but so different was the management now, that the ration of provisions, instead of 6d. cost 2s. One person only had enjoyed contracts to the amount of 1,300,000l.; 3,700,000l. had passed through the hands of another contractor to be transmitted to America: but no voucher had been given for the expenditure of this immense sum; the accounts being contained in a few lines, accounting for 20,000l. in one line, 30,000l. in another, &c.

Thus,

Thus; he said, the ministry acquired a most unbounded and unconstitutional influence; and having the dangerous power of expending the national treasure without any check, corruption and venality every where abounded. He moved, therefore, that the expenditure of those vast sums annually sunk in extraordinaries should be brought under some controul; and that to extend the public expences beyond the sums granted by parliament, was an invasion of its peculiar and exclusive rights. Though this motion and some others of a similar tendency were rejected, the minds of the people were far from being conciliated. The opinion began to be so general, that ministers exercised an unconstitutional influence over the representatives, and that this influence was very much augmented within these few years, it was now supposed by many, that nothing short of a change in the constitution of parliament could remedy the evil complained of. To this purpose a petition was framed in the city of York, on the 30th Dec. 1779, where a number of the most respectable people in the county had assembled, and delegated 68 gentlemen as a committee to manage the correspondence necessary for carrying on the design, and forming an association to support and promote it. In this petition it was set forth, that, in consequence of the war, the public debt was greatly augmented, taxes increased, and trade and manufactures much affected. The profusion attending the war was complained of; and parliament was requested, previous to the raising of any new taxes, to inquire into, and correct the abuse of expenditure in the public money; to reduce exorbitant emoluments, abolish sinecure places and unmerited pensions, and apply the produce to the exigencies of the state. This petition was followed by others of a similar kind from 27 of the principal counties and most of the large towns in England. The most severe and opprobrious language was used in the county meetings with regard to the ministry and parliament. The latter were represented as void of all principle, ready to sacrifice both conscience and reputation to those in power; and, in short, bound by no ties but those of the most sordid interest; ready on all occasions to enrich themselves by the spoils of their country; and as persons to whom the honour or interest of the kingdom were matters of no consideration. The court, on the other hand, was looked upon as the receptacle of every one who harboured ill designs against the people of Britain, and where no body stood any chance of advancing himself but by adulation and extreme servility. The emissaries of America and the other enemies of Great Britain are said to have been active in fomenting these discords, which at this period arose to an height unknown for a century past. The ministry, however, continued firm and undaunted. Previous to the taking any of the petitions into consideration, they insisted on going through the business of the supply, by determining the ways and means; nor did either the number of English petitions, or an additional one from the island of Jamaica setting forth the extreme danger that island was in, make them alter their resolution in the least. At last, in the beginning of February 1780, a plan was brought forward by

Mr Burke, for securing the independency of parliament, and introducing economy into the various departments of government. This plan, among other things, proposed the abolition of offices of treasurer, comptroller, and collector of the household; treasurer of the chamber, master of the household, the board of green cloth, and several other places under the steward of the household; and removing the great wardrobe, the jewel office, the robes, board of works, and the civil branch of the board of ordnance. Other reformations were also proposed; but though the temper of the times obliged the minister to admit the bill and even to pretend an approbation of the plan, he meant nothing less than to admit it in its full extent, or indeed in any part, if it could be prevented. When the plan, therefore, which he had approved in general, came to be particularly considered, he was found to be determined against every part of it. The general temper of the people, without doors, however, seemed now to be affected many of the members of parliament, and made them desert their old standard. An economical plan, proposed in the house of lords by the duke of Shelburne, was rejected only by a majority of 101 to 55. This was the strongest opposition that had appeared in that house for many years; but in the lower house matters still were worse. The first proposition in Mr Burke's plan was to abolish the office of secretary of state for the colonies; and the utmost efforts of ministers could preserve this office only by a majority of 101 to 201. The board of trade was abolished by an act in 1780; but this was the only defeat sustained by the ministry at this time; all the rest of the plan being rejected, excepting only one clause, by which it was determined that the offices of lieutenant colonel, ensign, &c. belonging to the yeomen of the guard should not any longer be sold, but given to officers in the army and navy on half pay, and of 15 years standing in their respective lines of service. This ill success was very mortifying to Mr Burke, who had expected to save more than a million annually to the nation. Administration, however, had still a greater defeat to meet with, than what she had experienced in the abolition of the board of trade. The 6th of April 1780 was the day appointed for taking into consideration the numerous petitions, from half the kingdom of England. They were introduced by Mr Dunning; who, in a very elaborate speech, set forth the many attempts that had been made to introduce reformations of economy into the plans of government. This had been defeated by ministerial artifice, or overthrown by mere dint of numbers; he concluded, therefore, and moved as a resolution of the house, *That the influence of the crown had increased, and ought to be diminished.* This motion being carried, after a long and violent debate, he next moved, that the house of commons was as competent to examine into and correct abuses in the expenditure of the civil list, as in any other branch of the public revenue. To this another was added by Mr Thomas Pitt, that it was the duty of the house to provide an immediate and effectual redress of the abuses complained of in the petitions. The ministry now requested that nothing farther might be done that night: but

was the temper of the house, that both these sessions were carried without a division; after which they were read a first and second time, and passed without a division.

101.) ENGLAND, HISTORY OF, UNTO THE RECENT RIOTS EXCITED ABOUT THE POPISH RELIGION. Ministry had never received such a complete defeat, nor ever been treated with so much civility of language. The news of the proceedings of this day were received by the people at large, with as much joy as if the most complete victory over a foreign enemy had been announced. Opposition, however, though masters of the field at present, did not imagine they had obtained any permanent victory, and therefore resolved to make the most of the advantages they had obtained. It was moved by Mr Dunning at the next meeting, that to ascertain the independence of parliament, and remove all suspicions of its being under undue influence, there should, every year, 7 days after the meeting of parliament, be read before that house an account of all the money issued out of the civil list, or any other branch of the revenue, since the last recess, in favour of any of its members. This passed with little difficulty; but when he moved that the treasures of the chamber and household, the comptroller, and master of the household, the clerks of the green cloth, and their deputies, should be excluded from having seats in the house, a warm debate ensued; and the motion was carried only by 215 to 213. This was the triumph of the popular party; their next motion, for the exclusion of revenue officers, being carried out by 224 against 195. A last effort made by Mr Dunning's proposal of an address to the throne against proroguing or dissolving the parliament, until measures had been taken to prevent the improper influence complained of in the petitions. On this occasion the debates were long and violent; but the motion was lost by 254 against 203. Ministry would gladly have silenced their friends from the vengeance of opposition: alleging the lateness of the hour, it grew then past midnight. The speaker of the house, however, perceiving Mr Fox about to rise, declared that the house should remain sitting; and the deserters from the popular party were forbidden to hear their conduct set forth in terms, as perhaps were never applied on any other occasion to members of the British senate. The last victory of administration confirmed the satisfaction and ill opinion which the people had conceived of the majority of their representatives. As in the height of that ill temper which the lust of parliament had created in the multitude, that those discontents broke out which were so involving the kingdom in universal desolation, hardships, under which individuals professing the Roman Catholic persuasion had laboured for many years in England, had lately awakened the consideration of the liberal-minded. The inutility and impropriety of persecuting people from whom no danger was apprehended, and who were not suspected of dissatisfaction to the civil constitution of the country, induced several persons of rank to undertake the procuring them relief. The calamities of the times had afforded the English Ro-

man Catholics a very proper occasion to manifest their attachment to government. They presented a most loyal and dutiful address to the king, containing the strongest assurances of affection and fidelity to his person and the civil government of this country. "Our exclusion (said they) from many of the benefits of that constitution, has not diminished our reverence for it. We behold with satisfaction the felicity of our fellow subjects; and we partake of the general prosperity which results from an institution so full of wisdom. We have patiently submitted to such restrictions and discouragements as the legislature thought expedient. We have thankfully received such relaxations of the rigour of the laws, as the mildness of an enlightened age, and the benignity of the British government, have gradually produced; and we submitively wait, without presuming to suggest either time or measure, for such other indulgence as those happy causes cannot fail in their own season to effect. We beg leave to assure your majesty, that our dissent from the legal establishment in matters of religion is purely conscientious; that we hold no opinions adverse to your majesty's government, or repugnant to the duties of good citizens; and we trust that this has been shown more decisively by our irreproachable conduct for many years past, under circumstances of public discountenance and displeasure, than it can be manifested by any declaration whatever. In a time of public danger, when your majesty's subjects can have but one interest, and ought to have but one wish and one sentiment, we think it our duty to assure your majesty of our unreserved affection to your government, of our unalterable attachment to the cause and welfare of this our common country, and our utter detestation of the designs and views of any foreign power against the dignity of your crown, and the safety and tranquillity of your subjects. The delicacy of our situation is such, that we do not presume to point out the particular means by which we may be allowed to testify our zeal to your majesty, and our wishes to serve our country; but we entreat leave faithfully to assure your majesty, that we shall be perfectly ready, on every occasion, to give such proofs of our fidelity, and the purity of our intentions, as your majesty's wisdom and the sense of the nation shall at any time deem expedient." This address was presented to the king on the 1st of May 1778, and signed by the duke of Norfolk, the earls of Surrey and Shrewsbury, the lords Stourton, Petre, Arundel, Dormer, Teynham, Clifford, and Linton; and by 163 commoners of rank and fortune. The only obstacle was, the difficulty of overcoming the prejudices of the lower classes, who would probably condemn the indulgence shown to the people of a persuasion, which, when powerful, had been extremely intolerant, and which therefore they had been taught to look upon with horror and detestation. But notwithstanding the prepossessions of the people, it was determined by several individuals of liberal sentiments, to espouse their cause as far as it could be done consistently with the principles of the constitution and the general temper of the times. Their being patronised by some of the principal leaders in opposition, was a circumstance greatly

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in their favour: as it showed that those, who professed to be the most strenuous friends to the freedom and constitution of this country, did not imagine they would be endangered by treating the Roman Catholics with more lenity than they had hitherto experienced. About the middle of May Sir George Saville made a motion for the repeal of some penalties enacted against them. He grounded his motion, on the necessity of vindicating the honour and asserting the true principles of the Protestant religion, of which the peculiar merit was to admit of no persecution. It ill became the professors of such a religion to be guilty of that intolerance with which they reproach others. The statutes he meant to repeal were such as gave occasion to deeds that were a disgrace to human nature, by inciting relations to divert themselves of the feelings of humanity, and by encouraging the rapacity of informers. He represented the address above quoted as a full proof of the loyal disposition of the Roman Catholics, and as an unfeigned testimony of the soundness of their political principles. In order, however, to silence the objections of those who might suspect them of duplicity, a test was proposed of so binding and solemn a nature, that no man could be supposed to imagine that any authority could annul its efficacy. The pains and penalties of the statutes to be repealed were laid before the house by Mr Dunning. By these statutes it was made felony in a foreign clergyman of the Roman communion, and high treason in one that was a native of this kingdom, to teach the doctrines or perform divine service according to the rites of that church: the estates of persons educated abroad in that persuasion were forfeited to the next Protestant heir; a son or any other nearest relation, being a Protestant, was empowered to take possession of his own father's, or nearest kin's estate, during their lives; a Roman Catholic was disabled from acquiring any legal property by purchase. The mildness of the British government did not indeed countenance the practice of the severities enacted by these statutes; but still the prospect of gain subjected every man of the Roman persuasion to the ill usage of informers; as on their evidence the magistrates were bound, however unwilling, to carry these cruel laws into execution. In consequence of these representations, the motion made in favour of the Roman Catholics was received without one dissenting voice; and a bill in pursuance to its intent was brought in and passed both houses. The test or oath by which they were bound was conceived in the strongest and most expressive terms. They were enjoined to swear allegiance to the king's person and family, and to abjure especially the pretensions to the crown assumed by the person called *Charles III.* They were to declare their disbelief and detestation of the following positions: "That it is lawful to put individuals to death on pretence of their being heretics; that no faith is to be kept with heretics; that princes excommunicated by the pope and council, or by the see of Rome, or any other authority, may be deposed or murdered by their subjects or by any others; that the pope of Rome, or any other foreign prelate or sovereign, is intitled to any temporal or civil jurisdiction or pre-eminence, either directly

or indirectly in this kingdom. They were bound to profess, that they made the aforesaid declarations with the utmost sincerity, and in the strictest and plainest meaning of the words in language of the test, without harbouring any secret persuasion, that any dispensation from Rome or any other authority, could acquit or absolve them from the obligation contracted by this oath, or declare it null and void." The indulgence shown the Roman Catholics in England enraged those of the same persuasion of Scotland, who hoped for a similar relief. Several gentlemen of station of great rank and character, and who were members of parliament, expressed their warm wishes that it should be extended to their country and declared their intention to bring in a bill for that purpose, the following session. The bill was approved by the general assembly of the church of Scotland; who rejected, by a majority of less than two, a remonstrance that had been proposed against it. In consequence of these promising appearances, a petition was prepared for parliament, in behalf of the Roman Catholics in Scotland. But these expectations were soon dashed. A pamphlet was published against the doctrine and professors of the Popish religion, which presented them as the common foes to mankind and the disturbers of all states; and this being circulated among all classes, raised a number of enemies to the intended petition. The opposition was at first chiefly conducted by some persons at Edinburgh, who assumed the title of a *Committee of Correspondence for the Protestant interest*; under that denomination corresponded with those who coincided with their opinions, and formed a very large proportion of the people of Scotland. As the committee at Edinburgh, from its residence in the capital of the kingdom, was deemed to consist of persons of the first importance, it directed in a manner the motions of the others. The persons who made up this committee, however, acted from no mean or necessary views; they aimed only at the preservation of the Protestant religion, and the liberties of their country; both which they conceived to be in danger, from the indulgence of government to individuals of the Roman Catholic persuasion. Actuated by these ideas, they exerted themselves with so much activity, that the principal gentlemen of the Catholic persuasion thought it requisite, for their safety, to convey an intimation to the British ministry, that they were desirous to drop the application they had proposed to make for an indulgence similar to that which had been granted to their fellow-subjects in England of the same communion. They published also in the newspapers, the representation they had made to the ministry; hoping thereby to convince the public that they were sincerely desirous to remove any cause of dissatisfaction on their own account, and to submit to any inconveniency sooner than occasion disturbance. But matters were now gone too far to be conciliated by any means. On the 24 Feb. 1779, the populace began an attack upon an unfinished house, just built, by a Roman Catholic bishop, which was intended to contain a place of worship, and committed it to the flames. The next day gutted another house in Blackfriars Wy.

had also a popish chapel; after which they proceeded to vent their resentment on several individuals of that persuasion, by destroying their estates. The next objects of their vengeance were those who had patronised the Roman Catholics, especially the houses of Principal Robertson and Crosby; but on hearing of the intentions of the rioters, the friends of both came to their assistance in such numbers, and so well prepared to resist the fury of the populace, that they did not dare exercise the violence they had premeditated. It put an end to the attempts of the mobs at Edinburgh. But the spirit of dissatisfaction at the indulgence intended to the Roman Catholics still remained in full force. Ministers were supposed to harbour a secret determination to undermine the Protestant religion, and to introduce popery; and in consequence with the most outrageous invectives. By degrees the same spirit was communicated to part of the English nation. The cry against popery became daily more loud among the inferior classes; and that inveteracy which had subsided for so many years, began to revive in as powerful a degree, as if the nation had been actually under the impending terrors of the inquisition. This was added the secret fears of others, who imagined it consistent with good policy to encourage a religion, from the professors of which such danger had accrued to the constitution of this country in former times. These, thoughaverse to all acts of violence, thought it necessary to repel the antipathy to it; and by no means how the least willingness to grant any further indulgence than it had hitherto experienced.— In this motive they were of opinion, that a revision of the laws enacted against it, though unauthorized, was sufficient to remove complaints of harshness and oppression on the part of the Roman Catholics; and they looked upon the penal statutes as a requisite bar to confine them within the bounds of submission. Thus, a party was formed in London, which took the name of the *Protestant Association*, of which lord George Gordon, who had rendered himself conspicuous in Scotland, by his opposition to the repeal, was elected president; and it now prepared itself in a decisive manner against the resolutions of the legislature. On the 29th May 1780, the associates held a meeting to settle in what manner they should present a petition to the house of commons against the repeal of the penal statutes. In the opening speech was made on this occasion by their president, who represented the Roman persuasion as gaining ground rapidly in this country; that the only method of stopping its progress, was to oppose it with a spirited remonstrance to their representatives, and to tell them in plain and resolute terms, that they were determined to preserve their religious freedom with their lives, &c. This having been received with the loudest applause, resolved, that the whole body of the association should meet on the 2d of June, in St George's Fields, at 10 o'clock in the morning, to accompany him to the house of commons on the delivery of the petition, in order to satisfy parliament, that the numerous subscriptions to it were real and sedicious, as it had been alleged that many of

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them were. This being unanimously assented to, he informed them, that if he found himself attended by fewer than 20,000, he would not present the petition. He then directed them to form themselves into four divisions; the 1st, 2d, and 3d, to consist of those who belonged to the City, Westminster, and Southwark; the 4th of the Scotch residents in London. They were, by way of distinction, to wear blue cockades in their hats. Three days previous to the presentation of the petition, he gave notice of it to the house, and acquainted it with the manner in which it was to be presented; but it was received with as much indifference and unconcern as all his former intimations. On the 2d of June, about 50 or 60,000 men assembled in St George's Fields. They drew up in four separate divisions, as had been agreed, and proceeded to the parliament house, with lord George Gordon at their head. An immense roll of parchment was carried before them, containing the names of those who had signed the petition. On their way to the house, they behaved with great peaceableness and decency; but as soon as they were arrived, great disturbances took place. The rioters began by compelling all the members of both houses they met with, to put blue cockades in their hats, and call out, "No Popery." They forced some to take an oath that they would vote for the repeal of the popery act, as they styled it. They treated others with great indignity, posting themselves in all the avenues to both houses; the doors of which they twice endeavoured to break open. Their rage was chiefly directed against the members of the house of lords; several of whom narrowly escaped with their lives. During these disturbances, lord George Gordon moved for leave to bring up the petition. This was readily granted; but when he proposed it should be taken into immediate consideration, it was strenuously opposed by almost the whole house. Enraged at this, he came out several times to the people during the debates, acquainting them how averse the house appeared to grant their petition, and naming particularly those who had spoken against it. Several members of the house expostulated with him in the warmest terms on the unjustifiableness of his conduct; and one of his relations, col. Gordon, threatened to run him through the moment any of the rioters should force their way into the house. It was some hours before the house could carry on its deliberations with any regularity, which was not done till the members were relieved by the arrival of a party of the guards. Order being restored, the business of the petition was resumed; when lord George Gordon told them it had been signed by near 120,000 British Protestant subjects. He therefore insisted that the petition should be considered without delay. But notwithstanding the dangers with which they were menaced, and the proof which the mover of the petition had given, that no means should be left unemployed to compel them to grant it, the commons continued immovable in their determination. Of 200 members, then present in the house, six only voted for it. In the mean time, the mob had dispersed themselves into various parts of the metropolis, where they demolished

two Romish chapels belonging to foreign ministers; and openly vented the most terrible menaces against all people of that persuasion. On the 4th of June, they assembled in great numbers in the eastern parts of London; and attacked the chapels and houses of the Roman Catholics in that quarter, stripping them of their contents, which they threw into the street, and committed to the flames. They renewed their outrages on the following day, destroying several Romish chapels, and demolishing the house of Sir George Saville, in resentment of his having brought into parliament the bill in favour of the Roman Catholics. Next day both houses met as usual; but finding that no business could be done, they adjourned to the 19th. During the 6th and 7th of June, the rioters were absolute masters of the metropolis and its environs. Some of those who had been concerned in the demolition of the chapels belonging to foreign ministers, having been seized and sent to Newgate, the mob collected before that prison, and demanded their immediate release. On being refused, they proceeded to throw fire-brands and all kinds of combustibles into the keeper's house; which communicated the fire to the whole building; so that this immense pile was soon in flames. In this scene of confusion the prisoners were all released. They amounted to about 300; among whom were several under sentence of death. They set fire, in the same manner, to the King's Bench and Fleet prisons, and to a number of houses belonging to Roman Catholics. The terror excited by these incendiaries was such, that most people hung out of their windows pieces of blue silk, which was the colour assumed by the rioters; and chalked on their doors and shutters the words, "No Popery," by way of signifying they were friendly to their cause. The night of the 7th of June concluded these horrors. No less than 36 different conflagrations were counted at the same time. The bank had been threatened, and was twice assailed; but happily was too well guarded for their attempts. In the evening, large bodies of troops arrived from all parts, and came in time to put a stop to the progress of the rioters. They fell upon them every where, and multitudes were slain and wounded, besides the numbers that perished through intoxication. It was not until the afternoon of the 8th, that the people began to recover from their consternation. During great part of the day, the disorders of the preceding night had created so terrible an alarm, that the shops were almost universally shut up over all London. The melancholy effects of misguided zeal were not, however, confined solely to London. The outrageous disposition of the populace was preparing to act the like horrid scenes in other parts of England. The mob rose in Hull, Bristol, and Bath; but through the timely interposition of the magistracy, these places were saved from their fury.

(102.) ENGLAND, HISTORY OF, UNTO THE INVASION AND CAPTURE OF ST EUSTATIUS. On the subsiding of this violent commotion, it was thought proper to secure lord George Gordon. He was arrested, and committed close prisoner to the Tower, after having undergone a long examination before the principal lords of the

council. On the 19th of June, both houses met again according to adjournment. A speech was made on this occasion from the throne, acquainting them with the measures that had been taken in consequence of the disturbances, and assuring them of the utmost readiness to concur in whatever could contribute to the safety and maintenance of the laws and liberties of the people. The speech was highly approved; but the conduct of administration was severely censured, and charged with unpardonable neglect for not calling forth the civil power, and employing the military as due time to obviate the mischiefs that had been committed. Ministry excused themselves, from the want of sufficient strength to answer all the demands of assistance, that were made during the riots, and the absolute impossibility of suppressing them till the arrival of troops from the country. The various petitions were now taken into consideration, that had been presented for the repeal of the act which had occasioned the riots; but the house continued in the same mind. Nevertheless it was thought proper to yield somewhat to the prejudices of the people, by passing a bill for preventing persons of the Popish persuasion from teaching or educating the children of Protestants; but this was afterwards thrown out by the lords. Nothing could have happened more opportunely for the ministry than the riots above related; but such was the terror occasioned by them, that the ardour which had appeared for promoting popular meetings, and opposing the measures of government, was in a great degree suppressed. Even the county meetings were represented as having a tendency, like the Protestant association, to bring on insurrections and rebellions. Many began to consider all popular meetings as extremely dangerous; and among the commercial and sedentary people, there was no small number, who were so panic-struck by the late riots, that as attention to the principles of the constitution was over-ruled by their extreme anxiety about the preservation of their property. Indeed the friends of the association did not hesitate to allege, that the riots had been secretly encouraged by ministry, to produce these consequences: as an evidence of which they appealed to the trials of the rioters, among whom there were some Roman Catholics who were convicted of having set fire to their own chapels; notwithstanding which they were only subjected to a trifling fine; while others, guilty at all, more guilty, suffered death. Be that as it may, had it not been for these events, though the minister was again at the head of a majority in parliament, it is probable, that the spirit of opposition, which prevailed in the different counties, would have compelled administration to have made some concessions to the people. But these transactions greatly strengthened the hands of administration, and rendered the exertions of the popular leaders much less formidable. The popular party were also somewhat weakened, by the dissensions which took place among them at the county meetings and similar assemblies relative to annual parliaments and other political regulations proposed to be adopted. In the suppression of these riots, however, the interference of the military without the command of the magistracy

gistrate became a matter of suspicion to the people at large. In the house of lords the duke of Richmond expressed his hopes, that some of majesty's ministers would rise, and give their lips assurances, that the measures taken to suppress the riots, which were defensible only on the ground of necessity, would be so stated; that what was illegally done, on that ground, should be cured by an act of indemnity. Various observations were thrown out relative to the king's prerogative and military law: upon which lord Mansfield observed, that neither the king's prerogative nor military law had any thing to do with the conduct of government, in their endeavours to quell the late outrages. All men, all ranks, descriptions, and denominations, were bound, by their oath of allegiance, to interfere for the prevention of acts of high treason, or any, wherever any attempts to perpetrate such crimes were made in their presence; and were criminal, if they did not do it. In the whole of the proceedings, therefore, the military had not acted in their technical capacity as military, but merely exercised their duty as civil men, in which they, in common with other civil men, both a right and an obligation to exercise. In a body of men were convened, without referring to the actual perpetration of treason or felonious acts, then, by a clause in the riot act the presence of the civil magistrate was necessary, before the military could interpose at all; for this reason, that as no acts of felony were committed, they could have no plea in the civil action for meddling at all. But by the statute of the country, it became felonious in any combination of men to persevere in that combination, after the riot act had been read by a justice of the peace; and this being done, then, and still then, they had a constitutional reason for interposition; namely, the privilege and duty of ordering the commission of felony, whenever they had it in their power. This being, therefore, the plain voice of the law, his lordship did not see how any prerogative of the king had been infringed, nor how military law had been established. Nothing had been done out of the regular course of the law, and no power had been assumed by the soldiery which they did not possess as individuals, and not in their technical capacity as members of the military. This doctrine arose from being agreeable to the nation in general and was very freely censured both in newspapers and pamphlets. It was admitted, that if a man came accidentally, as individuals, to any place where felonies were committing, they might be as well as others of the king's subjects, prevented of them. But this was a disadvantage from that of bodies of armed troops sent under officers commissioned by the crown and with orders to act against riotous and unruly persons, without any authority from the civil magistrate. It was maintained, that the constitution of England knew no such character of mercenary soldier, at the sole will of the executive power. Soldiers were held to their duty in which affected no other part of the community: and no soldier, as such, could be employed in the service of the constitution, without

a particular act of parliament in his favour. The idea that a military man was convertible into a soldier or a citizen, as royalty might move its sceptre, was a novel idea, and only made for the present occasion. Mercenary armies were understood to consist of men, who had either detached themselves, or had been forced from civil societies. Laws were made on those suppositions, regarding their liberties and lives, such as no members of civil society could submit to. Soldiers were only tolerated by annual bills, and under repeated pretences; and the very idea of blending them with the common subjects of the state, and giving persons of their description a right of judging on its most important occurrences, would have filled our ancestors with horror. The laws tolerated an army for certain periods, and under certain restrictions; but there was no law which admitted the interference of the military in any of the operations of civil government. It was acknowledged, that the late atrocious riots had rendered an extraordinary exertion of power absolutely necessary: but it was at the same time contended, that the interposition of the army in those outrages, without any authority from the civil magistrate, was an act of prerogative unconstitutional and illegal, though perfectly seasonable and beneficial. The public safety and benefit might sometimes excuse exertions of power, which would be injurious and tyrannical on ordinary occasions: but the utmost care should be taken, that such extraordinary exertions should not be established as precedents, which might operate very fatally to the constitution. An act of indemnity to the ministry, therefore, on account of the necessity of the case, should be immediately passed. But if a large standing army was kept up, and the king was understood to be invested with a power of ordering the troops to act discretionally, whenever he should judge proper, without any authority from the civil magistrate, the people could have no possible security for their liberties. In vain might be their appeals to the courts of justice: for the efficacy of appeals of that kind, in such cases, would depend on the pleasure of the prince. Many were filled with similar apprehensions, and alarmed at the dangerous precedent which the late exertions of the military afforded, however necessary they might be from the very singular circumstances of the case. Among others, Sir George Saville, in an address to his constituents some time afterwards, declared, that he considered them as "fully, effectually, and absolutely, under the discretion and power of a military force, which was to act without waiting for the authority of the civil magistrates." A letter written by lord Amherst to lieutenant-colonel Twissleton, who commanded the troops employed in London for the suppression of the riots, and which was understood to be an order for disarming the citizens, was much canvassed in both houses of parliament. The letter, however, was denied to have such a meaning, and was said to be levelled only at disorderly persons who were found in arms. It excited, nevertheless, no inconsiderable alarm; and was an inducement, added to the consideration of the late riots, to lead a great number of citizens to provide themselves with arms, and

to join in plans of military association, that they might be enabled to protect themselves and the city from violence and outrage, without any future interposition of the military. We now return to the operations of the war, which, notwithstanding the powerful confederacy against Great Britain, seemed to be rather in her favour. The Spaniards had begun their military operations by the siege of Gibraltar, but with very little success, (see GIBRALTAR;) and the close of the year 1779 and beginning of 1780 were attended with some considerable advantages to naval Great Britain. On the 18th Dec. 1779, the fleet under the command of Sir Hyde Parker in the West Indies took 9 sail of French merchant ships, which, with several others, were under the convoy of some ships of war. Two days after he detached rear-admiral Rowley in pursuit of 3 large French ships. His success there has been already mentioned, (§ 99.) and about the same time several other vessels were taken by the same squadron commanded by Sir Hyde Parker. On the 8th Jan. 1780, Sir G. B. Rodney, who had been intrusted with the command of a fleet, one object of the destination of which was the relief of Gibraltar, fell in with 22 sail of Spanish ships, and in a few hours the whole fleet was taken. On the 16th, he engaged, near Cape St Vincent, a Spanish fleet, consisting of 11 ships of the line and 2 frigates, under Don Juan de Langara. The Spaniards made a gallant defence; but 4 of their largest ships were taken, and carried into Gibraltar; viz. the Phoenix of 80 guns and 700 men, on board which was the admiral Don Juan de Langara; the Minorca, of 70 guns and 600 men, Don Antonio Oyarvide commander; the Princesa, of 70 guns and 600 men, Don Manuel de Leon commander; and the Diligente, of 70 guns and 600 men, Don Antonio Abornoz commander. Two other 70 gun ships were also taken; but one of them was driven on shore on the breakers and lost, and the other was likewise driven on shore, but afterwards recovered. Four ships of the line escaped, and the two frigates: but two of the former were much damaged in the action; in the course of which one Spanish ship, the St Domingo, of 70 guns, and 600 men, was blown up. The 5 men of war taken were remarkably fine ships; and were afterwards completely refitted, manned, and put into the English line of battle. The Spanish admiral and his officers applied to Sir George Rodney to obtain the liberty of returning to Spain upon their parole of honour; but this he declined for some time, because he was informed that a great number of British seamen were then prisoners in Spain, who ought to have been released. However, afterwards receiving assurances that those should be immediately set at liberty, he released the Spanish admiral and officers upon their parole; and the prisoners in general were treated with such generosity and humanity, as made a great impression upon the court of Madrid and the Spanish nation. When Adm. Rodney had supplied the garrison of Gibraltar with provisions, ammunition, and money, he proceeded on his voyage to the West Indies; having sent home part of his fleet, with his Spanish prizes, under the command of rear-admiral Digby; who took a French man of war on his

return, the Prothée, of 64 guns and 700 men. On the 20th March, there was an action in the West Indies between some French and English men of war, the former under the command of Mons. de la Mothe Picquet, and the latter, being part of Sir Peter Parker's Squadron, under that of commodore Cornwallis. The engagement was maintained on both sides with great spirit; but the French at length gave up the contest, and made the best of their way for Cape Francois. Adm. Rodney having arrived in the West Indies, and taken upon him the command of his majesty's ships at the Leeward islands, an action happened between him and the French fleet under the command of count de Guichen, on the 17th of April. The British Squadron consisted of 30 ships of the line, besides frigates; and the French fleet of 23 ships of the line, and several frigates. The action began a little before one, and continued till about a quarter after 4 P. M. Adm. Rodney was on board the Sandwich, a 98 gun ship, which beat 3 of the French ships out of the line of battle, and entirely broke it. But he was at length the crippled condition of the Sandwich, and of several other ships, that it was impossible to pursue the French that night without the greatest disadvantage. The victory was indeed, claimed on both sides; but no ship was taken on either: and the French retired to Guadaloupe. Admiral Rodney's ship, the Sandwich had suffered so much, that for 24 hours he was with difficulty kept above water. Of the British there were killed in this engagement 120, and 22 were wounded. On the 15th May, another action happened between the same commanders. It did not commence till near 7 P. M. only 2 ships having engaged, which were soon separated and the whole ended in nothing decisive. Of the British 31 were killed and 100 wounded. The fleets met again on the 19th of the same month when another action ensued; but this also terminated without any material advantage on either side. In the last engagement 47 of the British were killed and 193 wounded. According to French accounts, the total of their loss in the three actions amounted to 158 killed and 21 wounded. It was a very unfavourable circumstance for Great Britain, that the French had have so formidable a fleet in the West Indies; and this great force of the enemy was augmented in June, by being joined with a Spanish Squadron near the island of Dominica. The French and Spanish fleets, when united, amounted to 34 ships of the line. They did not, however, attack any of the British islands, or even reconnoitre the fleet under the command of Sir G. B. Rodney, who then lay at anchor in Gros Islet bay. Such a deed, was the good conduct of that admiral, so sensible were the inhabitants of these islands to his services, that the houses of assembly of St Christopher's and Nevis presented addresses to him, testifying their gratitude for the security they enjoyed in consequence of his spirited and able exertions. In June, admiral Geary, who commanded the grand fleet, took 11 valuable merchant ships bound from Port au Prince to Bourdeaux and other ports of France: But in July a very important and unexpected capture was

by the Spaniards. On the 8th Aug. captain Utray, who had under his command the *Race Point* of 74 guns and two frigates, with the trade and for the E. and W. Indies under convoy, the misfortune to fall in with the combined fleets of France and Spain, which had sailed from the preceding day. The *Ramilles* and two frigates escaped: but the rest were completely surrounded, that 5 East Indiamen were taken, and 50 merchant ships bound for the West Indies. Their cargoes were extremely valuable: was one of the most complete naval captures made; and was a heavy stroke to the commerce of Great Britain. The Spaniards on this occasion behaved to their prisoners with great humanity; and made a suitable return for the general treatment which their countrymen had experienced from adm. Rodney. This loss, however, great as it was, was scarce sufficient to compensate the capture of Fort Omoo from the Spaniards, where upwards of three millions of dollars were gained by the victors, and, among other valuable commodities, 25 quintals of quicksilver, about which the Spaniards could not extract precious metals from their ores. But while British were thus making the most vigorous efforts, and even getting the better of the powers who opposed them fairly, enemies were raised up throughout all Europe, who by reason of their acting indirectly, could neither be opposed nor resisted. The power which most openly manifested its hostile intentions was Holland; but besides this, a most formidable confederacy, under the name of the *armed neutrality*, was formed, eventually with a design to crush the power of Great Britain. Of this confederacy the late Catherine of Russia declared herself the head; and her son was intimated on the 26th Feb. 1780, in a declaration addressed to the courts of London, Versailles, and Madrid. In this piece it was observed, that, though from the conduct of her imperial majesty, it might have been hoped, that her subjects would have been allowed peaceably to enjoy the fruits of their industry, and of the advantages belonging to all neutral nations, experience had proved the contrary: her imperial majesty's subjects had been often molested in their navigation, and retarded in their operations, by the ships and privateers of the belligerent powers. Her imperial majesty therefore declared, that she would herself under the necessity of removing those vexations which were offered to the commerce of Russia, as well as to the liberty of commerce in general, by all the means compatible with her dignity and the welfare of her subjects: that before she came to any serious measures, and in order to prevent all new misunderstandings, she thought it just and equitable to expose to the eyes of all Europe the principles which she had adopted for her conduct, and which were contained in the following propositions: 1. That neutral ships should enjoy a free navigation, even from port to port, and on the coasts of the belligerent powers. That all effects belonging to the subjects of the belligerent powers should be looked upon as free on board such neutral ships, excepting only such goods as were stipulated contraband. 3. Her imperial majesty, for the proper understanding of

this refers to the articles 10. and 11. of her treaty of commerce with great Britain, extending her obligations to all the other belligerent powers. In the treaty made between Great Britain and Russia in 1734, it is said, "The subjects of either party may freely pass, repass, and trade in all countries which now are or hereafter shall be at enmity with the other of the said parties, places actually blocked up or besieged only excepted, provided they do not carry any warlike stores or ammunition to the enemy: as for all other effects, their ships, passengers, and goods, shall be free and unmolested. Cannons, mortars, or other warlike utensils, in any quantity beyond what may be necessary for the ship's provision, and may properly appertain to and be judged necessary for every man of the ship's crew, or for each passenger, shall be deemed ammunition of war; and if any such be found, they may seize and confiscate the same according to law: but neither the vessels, passengers, nor the rest of the goods, shall be detained for that reason, or hindered from pursuing their voyage." The same enumeration of the goods, stipulated as contraband, was given in the treaty concluded between Great Britain and Russia in 1766. 4. That in order to determine what characterises a port blocked up, that denomination should not be granted but to such places before which there were actually a number of enemy's ships stationed near enough so as to make its entry dangerous. 5. That these principles should serve as rules in the judicial proceedings and sentences upon the legality of prizes. Her imperial majesty declared, that she was firmly resolved to maintain these principles; and that, in order to protect the honour of her flag and the security of the commerce and navigation of her subjects, she had given an order to fit out a considerable part of her naval forces. She added, that this measure would have no influence on the strict and rigorous neutrality which she was resolved to observe, so long as she should not be provoked, and forced to depart from her principles of moderation and impartiality. It was only in that extremity, that her fleet would be ordered to act wherever her honour, interest, and necessity should require. This declaration was also communicated to the States General by prince Gallitzin, envoy extraordinary from the empress of Russia; and she invited them to make a common cause with her, so far as such an union might serve to protect commerce and navigation. Similar communications and invitations were also made to the courts of Copenhagen, of Stockholm, and of Lisbon, in order, it was said, that, by the united care of all the neutral maritime powers, the navigation of all the neutral trading nations might be established and legalized, and a system adopted founded upon justice, and which, by its real advantage, might serve as rules for future ages. The memorial of the empress of Russia, though very unfavourable to the views of Great Britain, received a civil answer from that court: but by other powers it was received, as it might naturally be expected, with much more cordiality. In the answer of the king of France it was said, "what her imperial majesty claimed from the belligerent powers was nothing else than the rules prescribed to the French navy;

navy; the execution whereof was maintained with an exactness known and applauded by all Europe." He expressed his approbation of the principles and views of her imperial majesty; and declared, that from the measures she had now adopted, "solid advantages would undoubtedly result not only to her subjects but also to all nations." The kings of Sweden and Denmark also formally acceded to the armed neutrality proposed by the empress of Russia, and declared their perfect approbation of her sentiments. The States General did the same: but on account of that slowness of deliberation which prevails in the councils of the republic, it was not till towards the close of the year that their concurrence was notified to the court of Russia. It was resolved by the powers engaged in this armed neutrality, to make a common cause of it at sea, against any of the belligerent powers who should violate, with respect to neutral nations, the principles which had been laid down in the memorial of the empress of Russia. But though the British ministry could not openly engage in war with all the other powers of Europe, they determined to take severe vengeance on the Dutch, whose ingratitude and perfidy now became a general subject of speculation. It has already been observed, that, ever since the commencement of hostilities with the Americans, the Dutch had shown much partiality towards them. This continued to be the case, even beyond what the natural avidity of a mercantile people could be supposed to produce: Frequent memorials and remonstrances had of consequence passed between the two nations, and the breach gradually grew wider and wider, until at last matters came to an extremity, by a discovery that the town of Amsterdam was about to enter into a commercial treaty with America. This happened in the beginning of September 1780, by the capture of Mr Laurens, lately president of the American congress, and who had been empowered by that body to conclude a treaty with Holland. Mr Laurens himself was instantly committed prisoner to the tower of London, and a spirited remonstrance was made to the States of Holland, requiring a formal disavowal of the transactions. To this, however, no other answer could be obtained, than that they would take the matter into consideration according to the forms and usages of the country; and that a reply would be given as soon as the nature of their government would admit. Such an equivocal answer could not be satisfactory; and therefore the most vigorous measures were resolved on. On the 25th Jan. 1781, it was announced to the house, that his majesty had been obliged to direct letters of marque and reprisal to be issued against the States General and their subjects. For the causes and motives of his conduct in this respect, he referred to a public manifesto against that republic, which he had ordered to be laid before the house. The charges against the republic, however, were briefly summed up by lord North in his speech on the occasion. The states, he said, in open violation of treaties, had not only refused to give Great Britain that assistance, which those treaties intitled her to claim when attacked by the house of Bourbon, but had also, in direct violation of

the law of nations, contributed as far as they could to furnish France with warlike stores, and had also at length thought proper to countenance the magistracy of Amsterdam, in the insult which they had offered to this country, by entering into a treaty with the rebellious colonies of Great Britain, as free and independent states. By the treaty of 1678, it was stipulated, that, in case Great Britain was attacked by the house of Bourbon, she had a right to take her choice of either calling upon the States General to become parties in the war, and to attack the house of Bourbon within two months, or of requiring an aid of 10,000 troops, and 20 ships of war, which the States were to furnish immediately after the claim was made. But though this country had always preserved her faith with Holland, yet that republic had refused to fulfil the terms of this treaty. Lord North farther observed, that the States General had suffered Paul Jones, a Scotchman, and a pirate, acting without legal authority from an acknowledged government, to bring British ships to their ports, and to reftit there. A rebel privateer had also been saluted at the Dutch island of St Eustatius, after she had been suffered to capture two British ships within cannon-shot of their forts and castles. A memorial was presented at the Hague, in June 1779, on the breaking out of the war with Spain, to claim the aid we were entitled to require by the treaty of 1678; but of this not the least notice was taken on the part of the States. Two other notices had since been delivered, each of which met with the same reception. The British ministry had done all in their power to bring the States to a true sense of the interest; and when the necessity of the case compelled them to seize on Dutch ships carrying stores to France, they had paid the full value for the cargoes, and returned the ships; so that nothing of the private merchant, the private adventurer, or the States, had suffered. France only had incurred the inconvenience, by her being deprived of that assistance which she would have received from those cargoes. With respect to an observation that had been made, that the treaty laid before the house, between the Dutch and the Americans, was nothing more than a contemplative project, his lordship remarked, that it was actually signed and sealed; the names of Van Berkel the pensionary of Amsterdam, and Monsr de Neuville, a merchant and burgher of that city, being subscribed to it on the part of the magistracy of Amsterdam, and the name of John Lee, as a commissioner or agent for the congress of America. The States General had also refused to pay the least attention to the requisition in his majesty's memorial, delivered by Sir Joseph Yorke, that proper notice should be taken of Van Berkel and his associates: as far as such a refusal could be implied by a contemptuous silence. As to the principal magistrates of Amsterdam, they were so far from disavowing the fact, or attempting to palliate it, that they gloried in the whole transaction; and expressly declared, even to the States General, that what they had done was what their indispensable duty required. Lord North added, that he lamented the necessity of a war with Holland; but it appeared to him to be an unavoidable necessity.

He confessed the situation of this country to be truly alarming; but when he considered the powerful stand that had already been made against most alarming confederacy that ever had been made against Great Britain, the little success the enemies of this country had met with in their various attempts against it, and the spirit and resources of the nation, the public prospects seemed to him much less gloomy than some gentlemen represented them. Our difficulties were mainly great; but he trusted that they were by no means insuperable. He was neither desirous of concealing their magnitude, nor afraid to meet them, great as they must be acknowledged; because he was convinced, that when the force of the country was fully exerted, it was equal to the test; and that the only means of obtaining a durable and a just peace, was to show ourselves capable of carrying on the war with spirit and vigour. It must be confessed, however, before this national resolution could possibly have been communicated officially to the naval commanders in the West Indies, the Dutch were already attacked. The defenceless island of St. Eustatius was, on the 3d Feb. 1781, summoned by admiral Rodney and general Vaughan to surrender to the arms of Great Britain, and only one day given to consider of it. The immense property on the island was confiscated, and a sale intended, with such circumstances of apparent rapacity, as not only became the subject of a discussion in parliament, but drew upon this nation the ill will of all Europe. See EUSTATIUS, ST. 23.) ENGLAND, HISTORY OF, UNTO THE CONQUEST OF TOBAGO, AND THE CAPTURE OF DR. CORNWALLIS'S ARMY. At this time the island did not appear to have acted with their usual prudence. Notwithstanding their provocations towards Britain, they had made no preparations for war in case of being attacked. It appeared, however, that they retained their martial valour, and were in fact the most formidable naval enemies Britain had to contend with. In August 1781, they had equipped a considerable squadron, the command of which was given to admiral Zoutman. On the 5th of that month, this squadron fell in with the British fleet commanded by admiral Hyde Parker. The force commanded by the Dutch admiral consisted, according to their own account, of 1 ship of 74, one of 64, three of 54, and one of 44, frigates; but the English account represents the Dutch fleet as consisting of eight two-decked ships. No gun was fired on either side till they were within the distance of half musket-shot. The action began about 8 A. M. and continued an unceasing fire for 3 hours and 40 minutes. Both sides fought with equal ardour, and little advantage was gained on either. When the heat of the action was over, both squadrons lay to a considerable time near each other, when the British ships of war with their convoy bore away for the Texel: and the English ships were all too disabled to follow them. A Dutch 74 gun ship sunk soon after the action. On board the British fleet 104 were killed, and 339 wounded; the loss of the Dutch was probably greater. Admiral Zoutman, in the account of the engage-

ment transmitted by him to the Stadtholder, said, that his men "fought like lions;" and it was said by the British admiral, in the account sent by him to the admiralty, that "his majesty's officers and men behaved with great bravery, nor did the enemy show less gallantry." The admiral of the Dutch fleet was promoted, honorary rewards were given to the principal officers, and two months pay to the men, for their behaviour in this action. When admiral Parker's fleet arrived at the Nore, his majesty, in order to testify his sense of his merit, went on board his ship, with the avowed design, as it is said, of conferring on him the honour of knighthood; but this the admiral thought proper to decline; and it was generally supposed, that this veteran officer was much disgusted that more ships had not been sent to him, for which he had applied, and which he conceived might have been spared, and whereby he might have been enabled to obtain a complete victory. Thus the war was still carried on in various parts of the globe in such a manner, as seemed to evince the impossibility of crushing the power of Great Britain by any force whatever. In Europe the utmost efforts of France and Spain were able to produce nothing more than the annual parade of a mighty fleet in the channel. This was answered by the appearance of a British fleet so formidable that the allies never dared attack them. The states of Holland had drawn out their force; and this too was opposed by one, which, if insufficient to conquer, was at least able to prevent their effecting any thing detrimental to our possessions. In the East Indies the united powers of the French and Indians had been conquered, and the Dutch settlements had suffered severely. (See INDOSTAN.) In 1781, however, the British naval power in the West Indies seemed to sink, and some events took place which threatened the total ruin of the empire in those parts. This was owing to the vast superiority of the combined fleets of France and Spain, by whom that of Britain was so far outnumbered, that they could not achieve any thing of consequence. An ineffectual attempt on the island of St. Vincent (See VINCENT, ST.) was made by admiral Rodney; and an indecisive engagement took place, April 28th 1781, between Admiral Hood and the count de Grasse; the event of which, however, if not advantageous, was certainly honourable to Britain, as the French had a superiority of 6 ships of the line. The damage done to the British ships having obliged them to retire to Barbadoes to refit, the French took that opportunity to make a descent on the island of Tobago. (See TOBAGO.) The governor, Mr Ferguson, made a gallant resistance; but was at last obliged to surrender, as no prospect of success appeared. On his return to England he complained loudly that the island had been unnecessarily lost. Admiral Rodney had sent rear-admiral Drake with six, sail of the line, three frigates, and some troops, to the assistance of the island; but they were sent too late, and the island had capitulated before any relief was afforded it. In a letter of admiral Rodney, which was published in the gazette, some surprise was expressed, that the place had surrendered so soon: upon which governor Ferguson published

an account of the siege, signed with his name, in all the London papers, in which he recriminated on the admiral. The governor's narrative was so perspicuous, so apparently satisfactory, and his charge against the admiral so strong, that it was thought incumbent on the latter to vindicate his conduct: but no answer to the governor's accusation ever appeared. Besides the inconveniences which the British West India islands suffered in consequence of the war, it was also a misfortune to some of them, that they were involved in domestic disputes, occasioned by their dissatisfaction at the conduct of their governors. This was particularly the case with Jamaica and Barbadoes, in both which islands there were frequent contests between the houses of assembly and their governors. But the remonstrances of the inhabitants on this subject did not meet with much attention, from those who had it in their power to afford them relief: for it seemed, indeed, to be a maxim with the British ministry at this period, to pay little regard to any complaints from the subjects of the empire, respecting any abuse of authority, from whatever quarter they might come, Ireland only excepted; and, with respect to that kingdom, they were induced to relax a little from their high tone, by the powerful and energetic arguments of the Irish volunteers. (See IRELAND.) But the great and decisive stroke, which happened this year, was the capture of lord Cornwallis with the division of the army under his command. Other events, indeed, were sufficiently mortifying. The province of West Florida had been reduced by the Spaniards; Minorca was besieged by them with an apparent impossibility of holding out; the island of St Eustatius was surprised by the French; and in short every circumstance seemed to proclaim the necessity of putting an end to a war so calamitous and destructive.

(104.) ENGLAND, HISTORY OF, UNTO THE MOTION FOR PEACE WITH AMERICA. All the disasters that had yet happened, however, were not sufficient to induce the ministry to abandon their favourite scheme of war with the colonies. The parliament met 27th Nov. 1781. The ministry had received such a signal defeat in 1780, as seemed to prognosticate the ruin of their power. They had indeed afterwards acquired a majority, and the extreme terror produced by the riots had contributed greatly to the re-establishment of their authority. The remembrance of what had passed, however, most probably induced them to a dissolution of parliament; while the success at Charlestown and other parts of America, once more gave them a decided majority in both houses. But the disasters of 1781 involved them in the utmost difficulty and distress. In the speech from the throne, his majesty observed, that the war was still unhappily prolonged by that restless ambition, which first excited the enemies of his crown and people to commence it, and which still continued to disappoint his earnest desire and diligent exertions to restore the public tranquillity. But he should not answer the trust committed to the sovereign of a free people, or make a suitable return to his subjects, for their zealous and affectionate attachment to him, if he consented to sa-

crifice, either to his own desire of peace, or to their temporary ease and relief, those essential rights and permanent interests, upon the maintenance and preservation of which, the future strength and security of Great Britain must depend. The events of war, he said, had been very unfortunate to his arms in Virginia, having ended in the loss of his forces in that province. No endeavours, he added, had been wanting on his part, to extinguish that spirit of rebellion which his enemies had found means to foment and maintain in the colonies, and to restore his deluded subjects in America, that happy and prosperous condition which they had formerly derived from a due obedience to the laws; but the late misfortune in that quarter called loudly for the firm concurrence and assistance of Parliament, to frustrate the designs of their enemies which were equally prejudicial to the real interests of America, and to those of Great Britain. At the close of the speech, his majesty observed, that among the many ill consequences which attended the continuation of the present war, he sincerely regretted the additional burden which it must unavoidably bring upon his faithful subjects: but he still declared his perfect conviction of the justice of his cause; and that he had no doubt, but that, by the concurrence and support of his parliament, by the valour of his fleets and armies, and by a vigorous, animated, and united exertion of the faculties and resources of his people, he should be enabled to restore the blessing of a safe and honourable peace to all his dominions. A motion for an address of thanks, in the usual style, was made in the house of commons. It was urged, that a durable and advantageous peace could result only from the firm, vigorous, and unremitting prosecution of the war. The present was not the time to relinquish hope, but to resolve upon exertion. By despair we should invite calamity to overwhelm us; and it would become a great and valiant people, whose resources were yet powerful and numerous, to submit where they should resist; to look with indifference upon their political importance; and to tarnish, by indolent pusillanimity, the national and dear-bought glories both of remote and recent wars, instead of opposing, with augmented force, a combination whose inveterate efforts to throw out of the scale of Europe, the whole political existence of Great Britain, were strengthened by the late victory over lord Cornwallis in Virginia. But if a general spirit of unanimity, requisite at one of the most alarming and important periods in the British annals, were to arise within the walls of parliament, and thence to diffuse itself throughout the body of the people, the gloom that hovered round us would rapidly disappear, and great successes would conduct the nation back to all its pristine splendor and felicity. This address was vehemently opposed by Mr Fox and Mr Burke. The latter remarked, that there could be a greater misfortune than had already been undergone by this kingdom, in the present disgraceful contest, it was hearing arise up in the great assembly of the nation, to vindicate such measures. If the ministry and the parliament were not to be taught by experience

neither calamities could make them feel, nor the voice of God make them wise ; what had this len and undone country to hope for ? If any thing could tend to deject the people of England, make them despair of their situation, and renounce themselves to their fate, it must be to receive information that their ministers, after all that had been suffered, were yet determined to go on with the American war. A battle might be lost, an enterprise might miscarry, an island might be captured, an army might be lost in the best of causes, and even under a system of vigour and exertion ; because the battle, after all the wisdom and bravery of man, was in the hands of heaven ; and if either, or all these calamities had happened on a good cause, and under the auspices of a vigilant administration, a brave people would not despair. But it was not so in the present case. Amidst all their sufferings and their misfortunes, they saw nothing so distressing as the weakness and backwardness of their ministers. They seemed still determined to go on, without plan, and without exertion, in this war of calamities ; for every thing that happened in it was a calamity. He considered them all alike, victories and defeats ; towns taken and towns evacuated ; new generals appointed, and old generals recalled ; they were all alike calamities in his eyes, for they all spurred him on to this fatal business. Victories gave us peace, defeats made us desperate, and both insisted on us to go on. They were, therefore, both calamities ; and the king's speech was the great calamity of all ; for the king's speech showed the disposition of the ministers : and this disposition was not to retreat an inch ; to go on, to plunge us deeper, to make our situation more disgraceful and more unhappy. In the course of the debate, it was contended on the part of administration, and particularly by lord North, that, at the address, as originally proposed, the king did not pledge themselves to any continuance of the American war : but this was strongly denied by the gentlemen in opposition. However, the point was at last decided in favour of ministry by a majority of 216 to 129 ; and the address was carried as originally proposed. In the house of peers, a motion for an address similar to that of the house of commons, was made by lord Northampton, and seconded by lord Walsingham. It was vigorously opposed by the earl of Shelburne ; who observed, that seven years had now elapsed since blood was first drawn in America ; and from that period to the present, the affairs of Great Britain had been continually growing worse. Long progress in the war had left us in a situation in which there were no advantages to console us ; but dangers and calamities had arisen, which were unknown to us at the commencement of the war. Of nearly 87,000 men sent to America, how few had returned ! What treasures had been in vain expended ! What enormous debts accumulated ! The most liberal national supplies had been followed by nothing but calamities ; and the whole proceedings of the ministry manifested want of system and of intelligence. Among other instances of mismanagement, his lordship remarked, that, instead of blocking up the French ports within their own harbours, or immediately

intercepting them on their putting out to sea, we had suffered them to sail far upon their expeditions to our distant settlements ; and when they had acquired this great advantage, we slowly followed their powerful armaments with inconsiderable squadrons, and scarcely ever reached the place of destination till the enterprises of the enemy were accomplished. His lordship also declared it to be his opinion, that the capture of earl Cornwallis was owing to the preceding capture of St Eustatius. As to the farther prosecution of the war with the least prospect of success, it was totally impossible : the nation was too much exhausted both of men and money ; recruits were not to be procured for the army ; and if we had the best first lord of the admiralty, and the ablest board that ever sat, it was impossible to provide for all the distant services of so extensive a war. The reason was obvious. The fine navy that belonged to Great Britain at the conclusion of last war, had been suffered to rot and moulder away ; while France and Spain had recruited and repaired their marine during the whole period of the peace. The duke of Richmond observed, that scarcely a seventh part of the people were represented, while all the rest had no concern whatever, either virtually or individually, in the management of their own affairs ; which, their lordships well knew, the constitution of this country, as originally framed, gave them a right to have. He appealed to the house, whether many of their lordships did not name the members for several boroughs, and whether the representatives were not chosen only by the management of two or three burgesses. Were this point reformed, he declared, that he should still expect to see the country capable of regaining some portion of its former greatness. He also made some observations on the interior cabinet, which had, he said, been the ruin of this country. To prove its mischievous tendency, he instanced the declaration of the late earl of Chatham, who confessed to the house, that " he was duped and deceived, and that he had not been ten days in the cabinet, before he felt the ground rotten under his feet." The duke likewise said, that though it was the middle of a war, he made no scruple to recommend it most strenuously to government, immediately to set about curtailing the numbers of the army, and that as much as possible. He recommended, that arms should be put into the hands of the people, for the purposes of domestic defence ; and he did not doubt but that in this case, they would act with greater power and success, than even the most numerous military forces. He also advised withdrawing the troops from America, augmenting the navy as much as possible, and sending such succours to the West India islands, as might enable them effectually to resist any attempts from the enemy. Lord Stormont defended the address as originally proposed ; and observed, that the language of the speech from the throne was proper to be held by any prince worthy of the crown, in a moment like the present ; and the long established custom rendered such an address as had been moved, the fit answer to it. The preservation of America, as a dependent part of the British empire, was too important

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tant to be relinquished; and the present crisis, so far from justifying despair, called for a redoubled ardour, and for immediate exertion. The lord chancellor said, that the speech from the throne, like all others at the commencement of a session, was no more than a brief state of the nation, delivered in the ancient style of composition, and conformably to established usage, from almost the first existence of a parliament; and as to the address, its language not being specifically binding, their lordships might vote in favour of it, without pledging themselves to support any future ministerial measure whatever. The house at length divided, when lord Shelburne's amendment was rejected by a majority of 75 to 31. A short protest against the address was entered by the duke of Richmond, the marquis of Rockingham, and earl Fitzwilliam; in which they declared, that they dissented, "for reasons too often urged in vain for the last 7 years, against the ruinous prosecution of the unjust war, carrying on by his majesty's ministers, against the people of North America, and too fatally confirmed by repeated experience, and the late disgraceful loss of a second army, to stand in need of a repetition." Though ministers thus succeeded in carrying the addresses in the usual form, they did not meet with the like success in their main plan of carrying on the war. After the debate on the number of seamen, which was fixed at 100,000, for the ensuing year, Sir James Lowther, moved as a resolution of the house, "That the war carried on with America, had been ineffectual for the purposes for which it was undertaken; and that all farther attempts to reduce that continent by force of arms would be in vain, and must be injurious to this country, by weakening her powers to resist her ancient and confederated enemies." This was supported by a number of arguments, interlarded with the most severe reflections on ministerial conduct. In the course of this debate it was observed, and indeed with evident truth, that every state of consequence in Europe, withheld its succours, and left us to contend alone against a multitude of enemies; so that we should search in vain for an ally from one corner of the universe to the other. As to the American war, in which the ministry so readily persisted, it was not like a war between two rival, or two neighbouring states, about a barrier or a boundary; a contest which, however it ended, could not detract much from the importance or weight of either. It was a war in which the conclusion of every campaign was against us; in which we had suffered every thing without gaining any thing. The American war, had been a war of delusion from the beginning to the end. Every promise had been broken, every assertion had been falsified, every object had been completely given up. The ministry had said one thing one day; and the next day had come down again, and with grave faces said what was directly contrary. But it was time to put an end to these delusions; not the least prospect of success in the war now remained; the period was therefore come, when it was indispensably necessary that the parliament should interfere, in order to avert that total ruin, with which this unhappy country was so immediately threatened.

The motion was opposed by lord North; who said, that if it was agreed to by the house, it must put an end to the American war in every shape, and even cripple the hands of government in other respects. It would point out to the enemies of this country, what were to be the mode and operations of the war; and thus inform the enemy, in what manner they might best point their operations against this country during the next campaign. Great Britain must not retain any post in the colonies; for that would be considered as one mode of attempting to reduce the Americans to obedience by force. But was it not manifest, that there might be a necessity of retaining certain posts in America, for the convenience even of carrying on the war against France and Spain? With respect to the American war in general, he acknowledged, that it had been extremely unfortunate; but he affirmed, that the misfortune and calamities which had attended it, though of a most serious and fatal nature, were matters rather to be deplored and lamented as the events of war, in themselves uncertain, than to be ascribed to any criminality in ministers. He had always considered the American war, as a war of the most cruel necessity; but at the same time, as a war commenced for the support of the just rights of the crown, and of the parliament of Great Britain. He would also venture to declare, that as the war was unfortunate to all his fellow subjects, so it was particularly distressing to himself. He had always considered it as the heaviest calamity of his life; and if, at any time, a sacrifice, not only of the emoluments of his situation, but even of the whole of his private fortune, could have purchased for his country, a safe and honourable peace, he would have made that sacrifice with the utmost cheerfulness, and thought the opportunity of offering it, the greatest blessing which could possibly have befallen him. His lordship added, that though he totally disapproved of the motion, yet he was willing to declare it to be his opinion, that it would not be wise nor right to go on with the American war, as we had hitherto done; that is, to send armies to travel from the south to the North of the provinces, to their interior parts, as had been done in a late case, and which had failed of producing the intended and the desired effect. This new method of carrying on the war, was as much disapproved of as the other; nor indeed did it seem to be generally believed that any material alteration was to take place in the ministerial system. General Burgoyne observed, that declaring a design of maintaining posts in America, of the nature of New York, was declaring a design of offensive war; and that such a maintenance of posts, would prove an improvident and a preposterous war. The great, if not the only purpose of keeping places of arms upon an enemy's coast, and especially upon a continent, must be for offensive war. During the glorious administration of the earl of Chatham, a place of arms was intended to be established at St Malo's; and it was afterwards established at Belleisle upon a more extensive view than that of a mere inlet into the country. It made a powerful diversion, and drew a great military force from Germany, to protect the whole

age of coast from Bayonne to Dunkirk, which as threatened by an embarkation from that place arms. But the circumstance which rendered at menace against the French coast either practicable of formidable war; our dominion of the sea. At that resplendent era; our naval flag rode the very bays of France, as securely as if anchored at Spithead; and a few frigates would have voyaged an army of 20,000 men to any one point the French or Spanish coast. This then could produced as a just precedent for a place of war. But what other precedents existed? The command of a strait, by which it was possible either to give an inlet for commerce, or to divide the ports of an enemy. Of such a nature was Calais, which, together with Dover, kept separate as often as we thought proper, the Great Channel and the German sea. Such also was Gibraltar; a place of arms; that gave a virtual superiority to the navy of England, though with an inferior number of ships, as separating the ports of the house of Bourbon in the ocean, from their ports in the Mediterranean, and preventing the junction of their fleets. But New York, as a place of arms, could answer no possible purpose but to feed an impracticable war, and to multiply that system of straits, loans, and influence, which, after having operated to the loss of every dependence of the country, was ready to give the final blow to the remains of property and liberty in the country itself. The general added, that he had not hitherto touched upon the principle of the American war. The impracticability of it was a sufficient justification for supporting the present motion. But he was now convinced, that the principle of the American war was wrong, though he did not been of that opinion when he formerly engaged in the service in America. He had been brought to this conviction by observing the uniform conduct and behaviour of the people of America. Passion, prejudice, and interest, might operate suddenly and partially; but when we saw a principle pervading the whole continent, the Americans resolutely encountering difficulty and death for a course of years, it must be a strong hint and presumption which could lead us to imagine that they were not in the right. It was alone, and the finger of God alone, that implanted the same sentiment in three millions of people. It would assert the truth of the fact against all which either art or contrivance could produce to the contrary. He was likewise now convinced, when comparing the conduct of the ministry, as we had developed their system, that the American war formed only a part of a general design, directed against the constitution of this country and the general rights of mankind. After some further debate, Sir James Lowther's motion was rejected by a majority of 220 to 179. This, however, was a majority in which the ministry had little reason to exult; as it was sufficiently apparent, from the numbers who voted against admission, that the uninfluenced sense of that house was clearly and decisively against any farther prosecution of the American war. Other arguments to the same purpose were used in the debate on the army estimates. On the 14th Dec. the secre-

tary at war informed the house, that the whole force of the army, including the militia, required for the service of 1782, would amount to 186,220 men, and for this force the parliament had to provide. The sum required for these troops for pay, clothing, and other articles, amounted to 4,320,000*l*. This military force exceeded that of the last year by 4074 men; and the expence was consequently greater by 29,667*l* 1*s* 6*d*. The increase was occasioned by the greater number of troops already sent, or then going, to the East Indies. But the expence of those troops was to be reimbursed by the East India company. After some farther statements, relative to the military force of the kingdom and its expence, had been made by the secretary at war, colonel Barré rose, and with great vehemence declared, that the estimates of the army, which were laid before that house, were scandalous and evasive. There was a much greater number of non-effective men than were stated in the estimates. In fact, they amounted to a 5th part of the army. The house should also recollect, that the estimates lying on the table did not compose the whole of the expences of the army; for extraordinaries of several millions were yet to come. Neither were the men under the several descriptions given by the secretary at war the whole number of military force employed. Other troops were employed solely at the discretion of the minister, and paid irregularly and unconstitutionally, without the assent or knowledge of the legislature; particularly the provincial corps in America, amounting to 9000 men in actual service, the statement of which force, though it had been called for from year to year, was never brought into the estimates. With respect to the army estimates, the colonel proceeded to observe, that in many instances they were filled with such abandoned impositions, that there appeared an actual design to treat inquiries from the parliament with sovereign contempt. Several regiments, of which the number of men did not amount to 100, were set down at 800; and others not having more than 50 were mentioned in the estimates as consisting of 5, 6, or 700. Indeed, too large a part of the armies, for which that house had been persuaded to give their votes, existed only upon paper. Amongst other regiments, the royal English fusiliers had not even a 4th of their complement. The royal Scots fusiliers were in a worse condition. Their number fell short of even 100 men. The 60th regiment was stated as amounting to 3500 men, when the fact was, that it did not consist of 1500; and many others might be enumerated in the same situation. The statement of the estimates relative to garrisons, particularly those of Gibraltar and Minorca, were equally delusive and overcharged. Lord George Germaine said, that the reason why the provincial corps had not been included in the estimates was, that some share of the public money might be spared, by avoiding to vote an establishment for these troops. They were raised and paid in a manner by much the most economical for the nation. They were solely under the management of the commander in chief; and an officer, called the *inspector-general of the provincial corps*, regu-

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which the sentence and the public orders were particularly stated; and in which they declared, that they "could not look upon the raising to the peerage a person so circumstanced, in any other light than as a measure fatal to the interests as well as to the glory of the crown, and to the dignity of that house; insulting to the memory of the late sovereign, and likewise to every surviving branch of the illustrious house of Brunswick; repugnant to every principle of military discipline, and directly contrary to the maintenance of the honour of that house, and to that honour which has for ages been the glorious characteristic of the British nation, and which, as far as could depend on them, they found themselves called upon, not more by duty than inclination, to transmit pure and unsullied to posterity." The ruinous tendency of the American war was now so strikingly apparent, that it became necessary for those who had a just sense of that dangerous situation of their country, who wished well to its interests or even wished to prevent its destruction, to exert their most vigorous efforts to put an end to so fatal a contest. Accordingly, on the 23d of February, a motion was made by general Conway, "That an humble address should be presented, earnestly imploring his majesty, that, taking into his royal consideration the many and great calamities which had attended the present unfortunate war, and the heavy burdens thereby brought on his loyal and affectionate people, he would be graciously pleased to listen to the humble prayer and advice of his faithful commons, that the war on the continent of North America might no longer be pursued for the impracticable purpose of reducing that country to obedience by force; and expressing their hope that the earnest desire and diligent exertion to restore the public tranquillity, of which they had received his majesty's most gracious assurances, might, by a happy reconciliation with the revolted colonies, be forwarded and made effectual; to which great end, his majesty's faithful commons would be ready most cheerfully to give their utmost assistance."

(105.) ENGLAND, HISTORY OF, UNTO THE REMOVAL OF LORD NORTH AND HIS FRIENDS FROM THE ADMINISTRATION. In the speech by which Gen. Conway introduced this motion, he set forth the enormities with which the British arms had so frequently been stigmatized by opposition, and the excessive animosity of the Americans. Not a single friend of the British government (he said) could be discovered amongst the inhabitants of North America, from the one end of the country to the other. We had, indeed, at present, no object to contend for: for if it could be admitted for a moment, even for the sake of argument, that it were possible we might conquer at last, what benefits would repay the struggle for the victory? We should then only gain a desert, a country depopulated by the war, which our despotism and barbarity, our avarice and ambition, our antipathy for freedom, and our passion for injustice, had kindled in her bosom. But all expectations of this kind were in the highest degree vain and absurd; though he had received intelligence (the general said) from a person lately arrived from America, in whose veracity, experience,

and discernment, he could implicitly confide, that the people of that country, although in arms against us, were still anxious for the accomplishment of peace. He was also assured, that one individual, at no considerable distance, was empowered on the part of the congress to treat with the ministers of Great Britain, for the attainment of so essential an object. These circumstances were not unknown to government; and a noble lord, who had lately retired from the office of secretary of state for the American department, had been particularly applied to on this interesting question. What reason could the ministers assign, if they had neglected to improve this singular advantage, and seemed to spurn at all ideas of negotiation? Could it be possible, that a series of nomious miscarriages and defeats had not operated as a cure for the inhuman and destructive love of war? Such was the situation of the matter that it behoved the ministers to negotiate peace almost on any terms. But as they had hitherto done nothing of this kind, it was indisputably necessary that the parliament should interpose and put an immediate end to a war so calamitous, so fatal, and so destructive. The motion was seconded by lord John Cavendish, who remarked that the American war had been a war of malice and resentment, without either dignity in its conduct, probability in its object, or justice in its end. It was, however, vigorously opposed by administration, who had still sufficient strength to gain their point, though only by a single vote, the motion being rejected by 194 to 193. The increasing strength of opposition now showed that the downfall of ministry was at hand. The decision of the last question was considered as a victory gained by the former; and Mr Fox immediately gave notice that the subject would be resumed in a few days, under another form. It was accordingly revived on the 27th of February; on which day a petition from the city of London was presented to the house, soliciting the house to interpose in such a manner as should prevent any further prosecution of the American war; after which general Conway moved, that it should be resolved "That it was the opinion of that house, that the farther prosecution of offensive war on the continent of North America, for the purpose of reducing the revolted colonies to obedience by force, would be the means of weakening the efforts of this country against her European enemies, and tend, under the present circumstances, dangerously to increase the mutual enmity so fatal to the interests both of Great Britain and America; and by preventing a happy reconciliation with the country, to frustrate the earnest desire graciously expressed by his majesty to restore the blessed public tranquillity." In the speech by which he introduced this motion, the general took notice of some objections that had been made to his former motion, under the idea that it was unconstitutional in that house to interfere with its advice in those things, which especially and indisputably belonged to the executive power. It appeared, however, from the journals, that from the days of Edward III. down to the present reign, parliament had at all times given advice to the crown in matters relating to war and peace. In the

of Richard II. it was frequently done ; and that of Henry IV. One remarkable instance of this was in the reign of Henry VII. when prince consulted his parliament respecting propriety of supporting the duke of Brittany in France, and also of declaring war against her ; and he told his parliament, that it was no other purpose than to hear their advice on heads that he called them together. In the reign of James I. the parliament interfered repeatedly with their advice respecting the Palatine match with Spain, and a declaration of war against that power. In the time of Charles I. were similar interferences ; and in the reign of Charles II. the parliament made remonstrances, but particularly in 1674 and on the subject of the alliance with France, they urged ought to be renounced, and at no time recommended a strict union with the United Provinces. To some of these remonstrances, indeed, answers were returned not very satisfactory ; and the parliament were informed they were exceeding the line of their duty, by encroaching upon the prerogative of the king. But so little did the commons of those times elude these answers, that they addressed the king to know who it was, that had advised him to return such answers to their loyal and constitutional remonstrances. In the reign of king William, repeated instances were to be found in journals, of advice given by parliament relative to Irish war and the war on the continent. Like occurred frequently in the reign of queen Anne : that princess, in an address from the parliament, was advised not to make peace with France until Spain should be secured to Austria ; and not to consent to peace until Dunkirk should be demolished. In short, it was manifest the whole history of English parliaments, that it was ever considered as constitutional for parliament to interfere, whenever it thought proper in all matters so important as those of peace or war. The general urged other arguments in support of his motion, which was seconded by Althorpe ; and petitions from the mayor, aldermen, and commonalty of the city of Bristol, from the merchants, tradesmen, and inhabitants of that city, against the American war, were presented.

In order to evade coming to any immediate determination on the question, a proposition was made by Mr Wallace, the attorney-general, that no bill should be entered into with America ; and a bill should be prepared to enable his majesty's ministers to treat on this ground : and upon the pretence of allowing time for this measure, it was moved, " that the present debate should be adjourned for a fortnight." The house divided upon this motion, when there appeared for it 215, against it 234 ; so that there was a majority against the ministry. Gen. Conway's original motion was then put and carried without division. He immediately made another for an address to the king, in which the American war was spoken of precisely in the same terms as was used in the first motion, and in which his majesty was solicited to put a stop to any further prosecution of offensive war against the colonies. This motion was agreed to ; and it

was also resolved, that the address should be presented on the first of March ; when his majesty returned an answer, in which he declared, that there were no objects nearer to his heart than the ease, happiness, and prosperity of his people ; that the house of commons might be assured, that, in pursuance of their advice, he should take such measures as should appear to him to be most conducive to the restoration of harmony between Great Britain and her revolted colonies, so essential to the prosperity of both ; and that his efforts should be directed, in the most effectual manner, against our European enemies, until such a peace could be obtained as should consist with the interests and permanent welfare of his kingdoms. But though the proceedings of the house of commons, in addressing his majesty against any farther prosecution of the American war, gave general satisfaction, the king's answer was not thought sufficiently explicit. It was therefore observed by general Conway, in the house of commons, on the 4th of March, that he hoped he should be supported by the house in his desire of securing the nation against the possibility of a doubt, that the American war was not now completely concluded. Something, perhaps, might yet be wanting, by which ministers might be so expressly bound, that, however desirous of evasion, they would not have it in their power to evade the injunction of that house. He therefore moved, " That an humble address should be presented to his majesty, to return his majesty the thanks of that house for his gracious answer to their last address ; that house being convinced, that nothing could, in the present circumstances of this country, so essentially promote those great objects of his majesty's paternal care for his people, as the measure which his faithful commons had most humbly, but earnestly, recommended to his majesty." This motion was unanimously agreed to ; after which the general made a second motion, that it should be resolved by that house, " That, after the solemn declaration of the opinion of that house, in their humble address presented to his majesty on Friday last, and his majesty's assurance of his gracious intention, that house would consider as enemies to his majesty and this country, all those who should endeavour to frustrate his majesty's paternal care for the ease and happiness of his people, by advising, or by any means attempting, the farther prosecution of offensive war on the continent of North America, for the purpose of reducing the revolted colonies to obedience by force." After some debate, the motion was agreed to without a division ; and on the 6th of the month, after a number of papers had been read in the house of peers, relative to the surrender of earl Cornwallis and the army under his command, the two following motions were made by the duke of Chandos : 1. " That it was the opinion of that house, that the immediate cause of the capture of the army under earl Cornwallis, in Virginia, appeared to have been the want of a sufficient naval force to cover and protect the same." 2. " That the not covering and protecting the army under earl Cornwallis in a proper manner, was highly blameable in those who advised and planned the expedition." After some debate, the motions were rejected, upon

upon a division, by a majority of 72 to 37. Thus the ministry still kept their ground, and with the most astonishing resolution combated the powers of opposition, which were daily increasing. On the 8th of March several resolutions were moved by lord John Cavendish; one of which was, that "the chief cause of all the national misfortunes was the want of foresight and ability in his majesty's ministers." Another respected the immense sum expended on the war, which was not denied to be above 100 millions. The expenditure of this sum became an object of severe scrutiny; but still all inquiry was frustrated. Mr Burke affirmed, that all public documents relative to the finances exhibited the mismanagement, profusion, and enormities, of an unprincipled administration; as an instance of which he adduced the presents given to the Indians for their services during the last year, amounting to no less than 100,000*l*. Several other particulars were pointed out; but the motions were lost by 226 to 216. The unpopularity of lord North was now farther augmented by his proposal of some new taxes, particularly on soap, the carriage of goods, and places of entertainment. On the 13th of March, it was moved by Sir John Rous, that "the nation could have no farther confidence in the ministers who had the conduct of public affairs." The debate was remarkable for an argument, in the affair of America, perfectly new, and unprecedented in all that had been said or written on the subject. Sir James Marriot informed the house, that though it had been frequently pretended, that the inhabitants of the colonies were not represented in the British parliament, yet the fact was otherwise: for they were actually represented. The first colonization, by national and sovereign authority, he remarked, was the establishment of the colony of Virginia. The grants and charters made of those lands, and of all the subsequent colonies, were of one tenor, and expressed in the following terms: "To have and to hold of the king or queen's majesty, as part and parcel of the manor of East Greenwich, within the county of Kent, *reddendum*, a certain rent at our castle of East Greenwich, &c." So that the inhabitants of America were, in fact, by the nature of their tenure, represented in parliament by the knights of the shire for the county of Kent! This curious legal discovery, that the American colonies were part and parcel of the manor of East Greenwich, though delivered by the learned judge with all proper gravity and solemnity, yet excited so much merriment in the house, that it was with great difficulty, for some time, that the speaker could preserve any kind of order. Lord North endeavoured to vindicate his own administration. He affirmed, that it could not be declared with truth, by that house, that the national calamities originated from the measures of the present administration. The repeal of the American stamp act, and the passing of the declaratory law, took place before his entrance into office. As a private member of parliament, he gave his vote in favour of both; but, as a minister, he was not responsible for either. When he accepted his post, the times were scarcely less violent than the present. He approached the helm when others had deserted it; and, standing there, he

had used his utmost efforts to assist his country. That the American war was just and required, and prosecuted for the purpose of supporting and maintaining the rights of the British legislature was a position, for the truth of which he was ever contend, whilst he enjoyed the power of doing at all upon the subject. As to peace, he not only wished most earnestly for it, but also the formation of such a ministry as might improve welcome to the country, and with unanimous cordiality co-operate for the welfare and honour of the state. It was not an attachment to the honours and emoluments of office which kept him so long in place; and he should be ready to throw impediments in the way of any reasonable and salutary coalition of parties, though the adjustment of an administration from which he might perceive himself excluded. The house at length divided upon the question, when he appeared for it 227, and against it 236; but there was a majority of nine in favour of administration. Notwithstanding this seemingly favorable determination, it was so well known that the ministry could not stand their ground, that, a few days after, a similar motion to that made by Sir John Rous was to have been made by the earl of Surrey; but when his lordship was about to rise for that purpose, lord North addressed him to the speaker, and endeavoured to gain the attention of the house. This occasioned some excitation, many members insisting, that the earl of Surrey ought to be heard first. But lord North observed, that as he understood the motion made by the noble earl was similar to that made a few days before, and the object of which was the removal of the ministers, he had such satisfaction to communicate to the house, as well conceived, render any such motion now necessary. He could with authority assure the house that his majesty had come to a full determination to change his ministers. Indeed, those persons who had for some time conducted the public affairs were no longer his majesty's ministers. They were not now to be considered as men holding the reins of government, and transacting matters of state, but merely remaining to do their duty, till other ministers were appointed. The sooner those new ministers were appointed, his lordship declared, that, in his opinion, the better would be for the public business, and the general interests of the nation. He returned thanks to the house for the many instances of favour and assistance which he had received from them during the course of his administration; and he declared that he considered himself as responsible, in all senses of the word, for every circumstance of ministerial conduct, and that he should be ready to answer to his country whenever he should be called upon for that purpose. The earl of Surrey informed the house, that the motion which he intended to have made was designed to declare the nation, and to all Europe, that the ministers were not dismissed because they wanted to rest from the fatigues of office, but because the parliament had totally withdrawn from them their confidence and their confidence, and were determined no longer to permit the perpetration of those violent abuses of their trust, to which, with a

and to the disgrace and detriment of the state, they had for such a length of time proceeded. Lordship, however, in consequence of the deration of lord North, waved his intended motion; and, after some farther debate, the house journeyed.

(106.) ENGLAND, HISTORY OF, UNTO THE FINAL VICTORY OVER THE FRENCH FLEET BY ADMIRAL RODNEY. Thus an end was put to an administration which had for so long been obnoxious a great part of the nation, and whose removal attributed very much to allay those dangerous ferments by which every part of the British dominions had been so long agitated. Peace now became as much the object of ministry as war had been formerly. Before we proceed to any account of the preparations for that desirable event, it is necessary to take notice of those military events which exposed the other his majesty's powers to an accommodation. The disaster of Cornwallis had produced a sincere desire of being at peace with America; but that could not be accomplished without making peace with France also; and that power haughty and elated with success. Minorca had now fallen into the hands of the Spaniards; although the capture of a few miserable islands, attended with such extreme difficulty as the Spaniards experienced, (see MINORCA) ought rarely to have intimidated them than otherwise, they now projected the most important conquests.

West India islands became the object of the French; and indeed there was too much reason to suppose that this object was within their reach. In the beginning of 1782, the islands of NEVIS and ST CHRISTOPHER were obliged to surrender to M. de Grasse the French admiral, and the marquis de Bouille, who had already signalized himself by several exploits. Jamaica was marked out as the next victim; but an end of all these aspirations was fast approaching. The advantages which the French in their naval engagements with the British fleet, had proceeded in their keeping at a great distance during the course of action, and from their good fortune and facility in gaining the wind. At last, the French Admiral, De Grasse, determined, after a decisive action on the 9th of April 1782, to do a close engagement with his formidable antagonist, admiral Rodney. This, with him, appeared to have been a matter of choice, as he intended to prevent the loss of a disabled ship, by sailing with which he might have avoided the disaster that followed. This memorable engagement took place on the 12th of April, off the island of Dominica. The British fleet consisted of 37 ships of the line, and the French of 34. The engagement commenced at 7 o'clock, A. M. and continued with unremitting fury, till half past 6 P. M. It is said, that no other signal was made by admiral but the general one for action, and for close fight. Sir G. Rodney was on board the Formidable, a ship of 90 guns; and the count de Grasse was on board the Ville de Paris, a ship of 110 guns, which was a present to the French king from the city of Paris. In the course of the action, the Formidable fired nearly 80 broadsides; for 3 hours the admiral's ship was involved in

so thick a cloud of smoke, that it was almost invisible to the officers and men of the rest of the fleet. The van division of the British fleet was commanded by Sir Samuel Hood, and the rear division by rear-admiral Drake; and both these officers greatly distinguished themselves in this important action. But the decisive turn on this memorable day was given by a bold manœuvre of the Formidable, which broke the French line, and threw them into confusion. The first French ship that struck was the Cæsar, a 74 gun ship, the captain of which fought nobly, and fell in the action. It is said, that when she struck she had not a foot of canvas without a shot-hole. Unfortunately, soon after she was taken possession of, she took fire by accident, and blew up, when about 200 Frenchmen perished in her, together with an English lieutenant and ten English seamen. But the Glorieux and the Hector, both 74 gun ships, were also taken by the British fleet; together with the Ardent of 64 guns; and a French 74 gun ship was also sunk in the engagement. It was a very close and hard fought action on both sides, but the French fleet was at length totally defeated. It was almost dark when the Ville de Paris struck, on board which the count de Grasse had fought very gallantly. There were 5,500 troops on board the French fleet, and the havoc among these was very great, as well as among the French seamen. The British had 230 killed and 759 wounded. Captain Blair, who commanded the Anson, and several other officers, were killed in the action; and lord Robert Manners, who commanded the Resolution, died of his wounds on his return home. On the 19th, a squadron which was detached from the main fleet, under the command of Sir Samuel Hood, captured the Cato and the Jason, two French men of war of 64 guns each; with the Aimable of 32 guns, and the Ceres of 18. About the same time the fleet under admiral Barrington took from the French off Ushant, the Pegasus of 74 guns, the Actionnaire of 64, and ten sail of vessels under their convoy. It was universally allowed, that in this engagement the French, notwithstanding their defeat, behaved with the greatest valour. De Grasse himself did not surrender till 400 of his people were killed, and only himself and two others remained without a wound. The captain of the Cæsar after his ensign staff was shot away, and the ship almost battered to pieces, caused his colours to be nailed to the mast, and thus continued fighting till he was killed. The vessel when taken was a mere wreck. Other French officers behaved in the same manner. The valour of the British requires no encomium; it was evident from their success. This victory was a very fortunate circumstance both for the interest and reputation of the British admiral. Before this event, the new ministry had appointed admiral Pigot to supersede him in the command in the West Indies; and it was understood, that they meant to set on foot a rigid enquiry into the transactions at St Eustatius. But the splendor of his victory put an end to all thoughts of that kind; he received the thanks of both houses of parliament for his services; and was created an English peer by the title of baron Rodney, of Rodney Stoke, in the county of Somerset. Sir Sa-

muel Hood was also created baron Hood of Catherrington, in the kingdom of Ireland; and rear-admiral Drake, and captain Affleck, were created baronets of Great Britain. Some attempts were also made, in the house of commons, to procure a vote of censure against the new ministry, for having recalled lord Rodney; but the motions made for this purpose were rejected by the majority. The count De Grasse, after his defeat, was received on board the *Barfleur* man of war, and afterwards landed on Jamaica, where he was treated with great respect. After continuing there some time, he was conveyed to England, and accommodated at the Royal Hotel in Pall-mall. His sword, which he had delivered up to admiral Rodney, was returned to him by the king. This etiquette enabled him to appear at court, where he was received by their majesties and the royal family in a manner suitable to his rank. From the time of his arrival in London to his departure, on the 12th of August 1782, he was visited by many persons of distinction, and in return visited the great officers of state, and some of the principal nobility, by whom he was entertained in a very hospitable style, receiving, indeed, every mark of civility which the British nation could bestow. He was treated with much respect even by the common people, from the opinion that was generally entertained of his valour and merit.

(107.) ENGLAND, HISTORY OF, UNTO THE TREATY OF PEACE WITH AMERICA, FRANCE, AND SPAIN. Though the designs of the French against Jamaica were now effectually frustrated, the victory was not followed by those beneficial consequences which many expected. None of the British islands which had been taken by the French in the West Indies were recaptured; though it was hoped that this would have been the result of our naval superiority in those seas. Some of those ships which were taken by admiral Rodney were afterwards lost at sea; particularly the *Ville de Paris*, *Glorieux*, and *Hector*. A British man of war, the *Centaur*, of 74 guns, was also sunk in lat. 48° 33' and lon. 43° 20', on the 24th Sept. 1782, in consequence of the disabled state to which it was reduced by the violent storms. Before the ship sunk, the officers and crew had sustained great hardships: most of them at last went down with the ship; but the lives of captain Inglefield the commander, and ten other officers and seamen, were preserved by their getting on board a pinnace. But even this was leaky; and when they went into it they were nearly in the middle of the Western ocean, without compass, quadrant, great coat or cloak; all very thinly clothed, in a gale of wind, and with scarcely any provisions. After undergoing extreme hardships and fatigues for 16 days, they at length reached the island of Fayal, one of the Azores. They were so much reduced by want of food and incessant labour, that, after they had landed, some of the stoutest men belonging to the *Centaur* had to be supported through the streets of Fayal. The Jamaica homeward bound fleet were also dispersed this year by a hurricane off the banks of Newfoundland, when the *Ramillies* of 74 guns and several merchant-men foundered. The British navy also sustained, about this time, a considerable loss at home, by the *Royal George*

of 100 guns, being overfet and sunk at Portfmoo. This melancholy accident, which happened on the 29th Aug. was occasioned by a partial being given to the ship, with a view to clean and sweeten her; but the guns on one side being removed to the other, or at least the greater part of them, and her lower deck ports being not locked in, and the ship thwarting on the tide with a squall from the NW. it filled with water, and she sunk in the space of three minutes. Admiral Kempenfelt, a very brave and meritorious officer, other officers, upwards of 400 seamen and women, besides many children, perished in her. Thus the prosecution of the war seemed to be attended with endless disasters and difficulties to both parties. The signal defeat above mentioned not only secured the island of Jamaica effectually from the attempts of the French, but prevented her from entertaining any other project than that of distressing the commerce of individuals. At the beginning of May an expedition was undertaken to the remote and inhospitable regions of Hudson's Bay; and though no force existed in that place capable of making any resistance, a 74 gun ship and two 36 gun frigates were employed in the service. All the people in that part of the bay either fled or surrendered at the first summons. The loss of the Hudson's Bay company, on this occasion, amounted to L.500,000, but the humanity of the French commander was conspicuous in leaving a sufficient quantity of provisions and stores of all kinds, for the use of the British who had fled at his approach. Another expedition was undertaken by the Spaniards to the Bahama Islands, where a like easy conquest was obtained. The island of Providence was defended only by 500 men, who being attacked by 5000, could make no resistance. A very honourable capitulation was granted by the victors, who likewise treated the garrison with great kindness afterwards. Several settlements on the Musquito shore were also taken by the Spaniards; but the Bay men, assisted by their negroes, bravely retook some of them: having formed a little army with the Indians of these parts, headed by colonel Despard, they attacked and carried the posts on the Black River, making prisoners of about 800 Spanish troops. The great disaster which befel this power, however, was their failure before Gibraltar, which happened in Sept. 1782, with such circumstances of horror and destruction as evinced the absurdity of persisting in the enterprise. See GIBRALTAR. Thus all parties were taught that it was high time to put an end to their contests. The affair of Cornwallis had shown, that it was impossible for Britain to conquer America; the defeat of De Grasse had rendered the reduction of the French possessions in the West Indies impracticable; the French; the final repulse before Gibraltar and its relief afterwards by the British fleet, put an end to that favourite enterprise, in which almost the whole strength of Spain was employed; and the engagement of the Dutch with admiral Parker showed them that nothing could be gained by a naval war with Britain. We have already taken notice, (§ 105.) of the events which led to the removal of lord North and the other ministers who for so long a time had directed public measures.

s kingdom. On this occasion, it was said, his majesty expressed a considerable agitation of mind, being in a manner compelled to make such an irre change in his councils; for the members of opposition would form no coalition with any of the ministry, the lord chancellor only excepted. On the 27th and 30th of March 1782, the marquis of Rockingham was appointed first lord of treasury; lord John Cavendish chancellor of exchequer; the earl of Shelburne and Mr. Pitt principal secretaries of state; lord Camden president of the council; the duke of Richmond master of the ordnance; the duke of Grafton lord of the treasury; admiral Keppel first lord of the admiralty; general Conway commander in chief of all forces in Great Britain; Mr. Thomas Townshend secretary at war; Mr. Burke paymaster of forces; and colonel Bute treasurer of the navy.

Other offices and honours were likewise conferred on different members of the opposition; and they were raised to the peerage, particularly admiral Keppel, Sir Fletcher Norton, and Mr. Dunning. The first business, in which the ministry engaged, was the taking such measures as were proposed to effectuate a general peace. No time was lost in the pursuit of this great object, or in taking the necessary steps for its attainment. Accordingly, the emperor of Russia having offered her mediation, to restore peace between Great Britain and Holland, Mr. secretary Fox, within two days after his entrance into office, wrote a letter to Mons. Simon, the Russian minister in London, informing him, that his majesty was ready to enter into a negotiation for the purpose of settling on foot a treaty of peace, on the terms and conditions of which was agreed to in 1674, between his majesty and the republic of Holland; and that, in order to facilitate such a treaty, he was willing to suspend immediately orders for a suspension of hostilities, if the states general were disposed to agree to that measure. But the states of Holland did not appear inclined to a separate peace; nor persons would it have been agreeable to the principles of sound policy, if they had agreed to any conditions of this kind. However, immediately on the change of ministry, negotiations for a general peace were commenced at Paris. Mr. Pitt was invested with full powers to treat with all the parties at war; and was also directed to propose the independency of the thirteen United Provinces of America, in the first instance, instead of making it a condition of a general treaty. Admiral Digby and general Carleton were also directed to acquaint the American congress with the views of the British court, and with the treaty that was made to acknowledge the independence of the United States. But before this work of pacification had made any considerable progress, the new ministry sustained an irreparable loss, by the death of the marquis of Rockingham, July 1782. Even before this event, considerable apprehensions were entertained of their want of union; but the death of that nobleman occasioned an absolute dissolution. The earl of Shelburne, who succeeded him as first lord of the treasury, proved so disagreeable to some of his colleagues, that Mr. Fox, lord John Cavendish, Mr. Burke, Mr. Frederic Montagu, and some others,

instantly resigned their places. Others, however, though little attached to the earl, kept their places; and his lordship found means to attach to his interest, Mr. Wm. Pitt, son to the late earl of Chatham. Though then in an early stage of life, that gentleman had distinguished himself greatly in parliament, and was now prevailed upon to accept the office of chancellor. The seceding members of the cabinet were at great pains to explain their motives to the house for taking this step. There were in general a suspicion that matters would be managed differently from the plan they had proposed while in office, and particularly that American independence would not be allowed; but this was positively denied at the time; and with truth, as appeared by the event. There appeared indeed a duplicity in the conduct of the earl of Shelburne, not easily to be accounted for. Even after it had been intimated by general Carleton and admiral Digby, that the independence of the United States should be granted by his majesty in the first instance, instead of making it a condition of a provisional treaty, his lordship expressed himself to the following purpose: "He had formerly been, and still was, of opinion, that whenever the independence of America was acknowledged by the British parliament, the sun of England's glory was set for ever. This had been the opinion of lord Chatham and other able statesmen; nevertheless, as the majority of the cabinet were of a contrary opinion, he acquiesced in the measure, though his ideas were different. He did not wish to see England's sun set for ever, but looked for a spark to be left which might light us up a new day. He wished to God that he had been deputed to congress, that he might have pleaded the cause of America as well as of Britain. He was convinced that the liberties of the former were gone as soon as the independence of the states was allowed; and he concluded his speech with observing, that he was not afraid of his expressions being repeated in America; there being great numbers there who were of the same opinion with him, and perceived ruin and independence linked together." If his lordship really was of opinion that his oratorical powers were able to persuade the Americans out of a system, for which they had fought so desperately for a number of years, he certainly over-rated them. No obstruction, however, arose to the general pacification. As early as Nov. 30th 1782, the articles of a provisional treaty were settled between Britain and America. See AMERICA, § 33. By these it was stipulated, that the people of the United States should continue to enjoy, without molestation, the right to take fish of every kind on the grand bank, and on all the other banks of Newfoundland; and that they should likewise exercise and continue the same privilege in the gulph of St. Lawrence, and at every other place in the sea, where the inhabitants used heretofore to fish. The inhabitants of the United States were likewise to have the liberty to take fish of every kind on such part of the coast of Newfoundland as British seamen shall resort to; but not to cure or dry them on that island. They were also to possess the privilege of fishing on the coasts, bays, and creeks of all the other dominions of his Britannic majesty in America; and the A-

merican fishermen were permitted to cure and dry fish in any of the unsettled bays, harbours, and creeks of Nova Scotia, Magdalen Islands, and Labrador. But it was agreed, that, after such places should be settled, this right could not be legally put in practice, without the consent of the inhabitants and proprietors of the ground. It was accorded, that creditors upon either side should meet with no impediment in the prosecution of their claims. It was contracted, that the Congress should earnestly recommend it to the legislatures of the respective states, to provide for the restitution of all estates and properties which had been confiscated, belonging to real British subjects, and of the estates and properties of persons resident in districts in the possession of his majesty's arms, and who had not born arms against the United States. It was resolved, that persons of any description should have free liberty to go to any part whatsoever of any of the thirteen United States, and remain in it for 12 months unmolested in their endeavours to recover such of their estates, rights, and properties as might not have been confiscated; and it was concerted, that the congress should earnestly recommend to the several states a revision of all acts or laws regarding the premises, so as to render them perfectly consistent, not only with justice and equity, but with that spirit of conciliation which, on the return of the blessings of peace, should universally prevail. It was understood that no future confiscations should be made, nor prosecutions commenced against any person, or body of men, on account of the part which he or they had taken in the present war; and that those who might be in confinement on such a charge, at the time of the ratification of the treaty in America, should be immediately set at liberty. It was concluded, that there should be a firm and perpetual peace between his Britannic majesty and the United States; that all hostilities by sea and land should immediately cease; and that prisoners on both sides should be set at liberty. It was determined, that his Britannic majesty should expeditiously, and without committing destruction of any sort, withdraw all his armies, garisons, and fleets, from every port, place, and harbour, of the United States. The navigation of the river Mississippi, from its source to the ocean, was to remain for ever free and open to the subjects of Great Britain and the citizens of the United States. In fine, it was agreed, that if any place or territory belonging to Great Britain, or to the United States, should be conquered by the arms of either before the arrival of the provisional articles in America, it should be restored without compensation or difficulty. In the treaty between Great Britain and France, it was agreed, that Newfoundland should remain with England, as before the commencement of the war; and to prevent disputes about boundaries, it was accorded that the French fishery should begin from Cape St John on the eastern side, and going round by the north, should have for its boundary Cape Ray on the western side. The islands of St Pierre and Miquelon, which had been taken in Sept. 1778, were ceded in full right to France. The French were to continue to fish in the gulph of St Lawrence, conformably to the fifth article of the treaty

of Paris. The king of Great Britain was to restore to France the island of St Lucia, and to cede and guarantee to her that of Tobago. The king of France was to surrender to Great Britain the islands of Grenada and the Grenadines, St Vincent, Dominica, St Christopher's, Nevis, and Montserrat. The river of Senegal and its dependencies, with the forts of St Louis, Podor, Galam, Arguin, and Portendic, were to be given to France; and the island of Goree was to be restored to it. Fort James and the river Gambia were guarantied to his Britannic majesty; and the gum trade was to remain in the same condition as before the commencement of hostilities. The king of Great Britain was to restore to his most Christian majesty all the establishments which belonged to him at the breaking out of the war in the coast of Orixá and in Bengal, with the liberty to surround Chandernagor with a ditch for draining the waters; and became engaged to secure to the subjects of France in that part of India, and on the coasts of Orixá, Coromandel, and Malabar, a safe, free, and independent trade, either as private traders, or under the direction of a company. Pondicherry, as well as Karikal, was to be rendered back to France; and his Britannic majesty was to give as a dependency round Pondicherry the two districts of Valanour and Behour; and as a dependency round Karikal, the four contiguous Magans. The French were again to enter into the possession of Mahe, and of the comptoir at Surat. The allies of France and Great Britain were to be invited to accede to the present pacification; and the term of four months was to be allowed them, for the purpose of making their decision. In the event of their averion from peace, no assistance on either side was to be given to them. Great Britain renounced every claim with respect to Dunkirk. Commissioners were to be appointed respectively by the two nations to inquire into the state of their commerce, and to concert new arrangements of trade on the footing of mutual convenience. All conquests on either side, in any part of the world whatsoever, not mentioned or alluded to in the present treaty, were to be restored without difficulty, and without requiring compensation. It was determined that the king of Great Britain should order the evacuation of the islands of St Pierre and Miquelon, 3 months after the ratification of the preliminary treaty; and that, if possible, before the expiration of the same period, he should relinquish all connection with St Lucia in the West Indies, and Goree in Africa. It was stipulated in like manner, that his Britannic majesty should, at the end of 3 months after the ratification of the treaty, or sooner, enter into the possession of the islands of Grenada and the Grenadines, St Vincent, Dominica, & Christopher's, Nevis, and Montserrat. France was to be put into possession of the towns and comptoirs which were to be restored to her in the East Indies, and of the territories which were to serve as dependencies round Pondicherry and round Karikal, six months after the ratifications of the definitive treaty; and at the termination of the same term, she was to restore the towns and districts which her arms might have taken from the English or their allies in that quarter of the globe.

The prisoners upon each side were recipi-ly to be surrendered, and without ransom, the ratification of the treaty, and on pay- the debts they might have contracted during captivity. Each crown was respectively to surse the sums which had been advanced for maintenance of their prisoners by the country e they had been detained, according to at- and authentic vouchers. With a view to nt every dispute and complaint, on account izes which might be made at sea, after the g of the preliminary articles, it was mu- y settled and understood, that the vessels and s which might be taken in the Channel, and e North Seas, after the space of 12 days, to mputed from the ratification of the premi- articles, were to be restored upon each side; the term should be one month from the Chan- d the North Seas, as far as the Canary islands sively, whether in the ocean or the Mediter- in; two months from the Canary islands as s the equinoctial line or equator; and lastly, months without exception in all other parts e world. These preliminary articles of peace concluded at Versailles on the 20th of Jan- , between Mr Alleyne Fitzherbert, minister potentiary on the part of his Britannic majes- nd Charles Gravier, comte de Vergennes, the r plenipotentiary on the part of the king of ce. At the same time the preliminary articles ace between Great Britain and Spain were concluded at Versailles, between Mr Fitzher- and the comte d'Aranda, the minister pleni- tiary for the Spanish monarch. It was ad- that a sincere friendship should be re-establi- sh between his Britannic majesty and his Catholic ty, their kingdoms, states, and subjects by nd land in all parts of the world. His Catho- majesty was to keep the island of Minorca; was to retain West Florida. East Florida was : ceded to him by the king of Great Britain. ten months from the date of the ratification e definitive treaty were to be allowed to the ts of the latter, who had settled in the island inorca and in the two Floridas, to sell their es, to recover their debts, and to transport : persons and effects, without being restrained a account of their religion, or on any other ence whatsoever, except that of debts and pro- tions for crimes. His Britannic majesty, was e same time to have the power to cause all effects that might belong to him in East Flo- , whether artillery or others to be carried a- . The liberty of cutting logwood, in a district hich the boundaries were to be ascertained, out molestation, was permitted to Great Bri- . The king of Spain was to restore the islands rovidence, and the Bahamas, without excep- , in the condition in which they were when : were conquered by his arms. All other uests of territories and countries upon either , not included in the present articles, were to ntually restored without difficulty or compen- on. The epoch for the restitutions to be made, for the evacuations to take place, the regu- ns for the release of prisoners, and for the ation of captures, were exactly the same as

those which have already been related, as stipu- lated in the preliminary articles with France.

(108.) ENGLAND, HISTORY OF, UNTO THE TREATY OF PEACE WITH HOLLAND. No sooner were these articles ratified and laid before par- liament, than the most vehement declamations against ministry took place. Never had the ad- ministration of lord North himself been arraigned with more asperity of language. The ministry defended themselves with great resolution; but found it impossible to avoid the censure of parlia- ment. An address without any amendment was indeed carried in the house of lords by 72 to 59; but in the lower house it was lost by 224 to 208. On the 21st Feb. some resolutions were moved in the house of commons by lord John Caven- dish, of which the most remarkable were, that the concessions made by Britain were greater than its adversaries had a right to expect; and that the house would take the case of the American loyalists into consideration. The last motion indeed his lordship consented to wave; but all the rest were carried against ministry by 207 to 190. These pro- ceedings, however, could make no alteration with regard to the treaty, which had already been rati- fied by all the contending powers, the Dutch on- ly excepted. The terms offered them were a re- newal of the treaty of 1674: which, though the most advantageous they could possibly expect, were positively refused at that time. Afterwards they offered to accept the terms they had former- ly refused; but the compliment was then return- ed, by a refusal on the part of Great Britain. When the preliminary articles were settled with the court of France and Spain, a suspension of arms took place with Holland also; but though the de- finitive arrangements with the other powers were finally concluded by Sept. the preliminary articles were only then settled with Holland. The terms were a general restitution of all places taken on both sides during the war, excepting the settle- ment of Negapatam in the East Indies, which was to remain in the hands of Britain, unless an equi- valent was given on the part of Holland. The na- vigation of the eastern seas was to remain free and unmolested to all the British shipping. The other articles concerned only the exchange of prisoners, and such other matters as are common to all trea- ties.

(109.) ENGLAND, HISTORY OF.—ACCOUNT OF THE STATE OF BRITAIN AT THE END OF THE WAR, IN 1783. An end was now put to the most dangerous war in which Britain had been hitherto engaged; and in which, notwith- standing the powerful combination against her, she still remained in a state of superiority to all her enemies. At that time, and ever since, it has appeared, how much politicians were mistaken, who imagined that the prosperity of Britain de- pended in a great measure on her colonies: Though for a number of years, she had not only been deprived of these colonies, but opposed by them with all their force; though attacked at the same time by three of the greatest powers in Eu- rope, and looked upon with an invidious eye by all the rest; the damages done to her enemies still greatly exceeded those she had received.

Their

Their trade by sea was almost ruined ; and on comparing the loss of ships on both sides, the balance in favour of Britain was 28 ships of the line and 37 frigates, carrying in all near 2000 guns. Notwithstanding this, however, the state of the nation appears to have been really such, that a much longer continuance of the war would have been impracticable. In the debates, which were kept up with the greatest violence on account of the peace, Mr Pitt set forth our situation with great energy and strength of argument. " It was in vain (he said) to boast of the strength of our navy ; we had not more than 100 sail of the line : but the fleet of France and Spain amounted nearly to 140 ships of the line. A destination of 72 ships of the line, was to have acted against Jamaica. Admiral Pigot, had only 46 sail to support it ; and it was a favourite maxim, of many members of the house, that defensive war must terminate in certain ruin. It was not possible that admiral Pigot could have acted offensively against the islands of the enemy ; for lord Rodney, when flushed with victory, did not dare to attack them. Would admiral Pigot have recovered by arms, what the ministers had regained by negotiation ? With a superior fleet against him, and in its sight, is it to be conceived, that he could have taken Grenada, Dominica, St Christopher's, Nevis, and Montserrat ? On the contrary, is it not more than probable, that the campaign in the West Indies, must have terminated in the loss of Jamaica ? In the east, it was true that the services of Sir Edward Hughes had been highly extolled ; but he could only be commended for a merely defensive resistance. Victory seemed to be out of the question ; and he had not been able to prevent the disembarkation of a powerful European armament, which had joined itself to Hyder Ally, and threatened the desolation of the Carnatic. (See INDOSTAN.) At home and in our own seas, the fleets of the enemy would have been nearly double to ours. We might have seized the intervals of their cruize, and paraded the channel for a few weeks ; but that parade would have only served to disgrace us. It was yet the only achievement in our power ; for to have hazarded an engagement, would have been equivalent to a surrender of the kingdom. Neither, in his opinion, was the state of our army to be considered as formidable. New levies could not be raised in a depopulated country. We might send upon an offensive scheme 5 or 6000 men ; and what expectation could be excited by a force of this kind ? To have withdrawn troops from America was a critical game. There were no transports in which they might be embarked ; and if it had been possible to embark them, in what miraculous manner were they to be protected against the fleets of the enemy ? As to our finances, they were melancholy. Let the immense extent of our debts be weighed ; let our resources be considered ; and let us then ask, what would have been the consequence of the protraction of the war ? It would have endangered the bankruptcy of public faith ; and this bankruptcy, it is obvious, if it had come upon us, might have dissolved all the ties of government, and have operated to the general ruin. To accept the peace on the terms

already related, or to continue the war, was the only alternative in the power of ministers. So was the *ultimatum* of France. At the same time, however, it ought to be remembered, that if peace obtained was better than could have been expected from the lowliness of our condition. We had acknowledged the American independence ; but what was that but an empty form ? We had ceded Florida ; but had we not obtained the islands of Providence and the Bahamas ? We had granted an extent of fishery on the coast of Newfoundland ; but had we not established ourselves five right to the most valuable banks ? We had restored St Lucia, and given up Tobago ; but had we not regained Granada, Dominica, St Christopher's, Nevis, and Montserrat ? And had we not rescued Jamaica from inevitable danger ? In Africa we had given up Goree ; but Goree was the grave of our countrymen ; and we had saved Fort James and the river Gambia, the best and the most healthy settlement. In Europe we had relinquished Minorca ; but Minorca is not useful in war, and in peace it must be supported at ruinous expence. We had permitted the reputation of the port of Dunkirk ; but Dunkirk was only be an object when ships of a far more draught to the present were in use ; the change in the operations of naval war, had taken away its importance. In the East Indies efforts had been made ; but let it be remarked that these efforts are inconsiderable in themselves, and could not be protected by us in the event of hostilities. In fine, it was objected that we had abandoned the unhappy loyalists to their implacable enemies. What is this but to impute to congress by anticipation a violence which common decency forbids us to expect ? But let it be considered, that the principle of assisting these unfortunate men would not have justified ministers to have continued the war. And let it be considered, that a continuation of the war would not have procured them any certain indemnity. The accumulation of our distresses must have added to theirs. A year or two longer, harder terms of peace might have been forced upon our acceptance. Their fate then must have been desperate indeed ! But as matters were now situated, there were hopes of mercy and reconciliation."

(110.) ENGLAND, HISTORY OF.—ACCOUNT OF SOME TRAITOROUS ATTEMPTS DURING THE WAR. Having thus given as full an account as our limits would allow, of the great national events, to the conclusion of the peace in 1783, we shall now give a detail of some others, which though of sufficient importance to deserve notice, could not have been mentioned earlier, without interrupting the narrative. It has repeatedly been observed, that through the violence of parties, a general temper of distrust and suspicion took place throughout the nation, inasmuch that the most improbable stories with respect to individuals began to gain credit, of which an instance was given in the case of Mr Sayre. From certain circumstances, however, it appeared, that there actually were persons in the kingdom, who without it possible to destroy the national strength, in fact a manner as to render it impossible for us to meet head against the attempts of our enemies. (11)

8th Dec. 1776, a fire broke out in the rope-
 side of the dock-yard at Portsmouth, which to-
 day consumed it, but without doing any other
 terial damage. For some time the affair passed
 in accident; but in clearing away the rubbish,
 a box was found with a wooden bottom, con-
 taining matches which had been lighted, and un-
 derneath was a vessel with spirit of wine: how-
 ever, the fire not having been properly supplied
 with air, had extinguished of itself before it touch-
 ed the spirit of wine. Had it caught fire, all the
 stores in the storehouse, sufficient to rig out 50
 of men of war, would have been destroyed.
 The beginning of 1777, a fire happened at Brif-
 tain, which consumed 6 or 7 warehouses; and by
 finding of machines similar to those already
 mentioned, it was evident that the fire had not
 been accidental. The terror of the public was
 greatly increased, and the most violent accu-
 sations against each other, were thrown out by
 ministerial and popular parties. On this point,
 however, they soon came to a right understand-
 ing, by the discovery of the author of all this mis-
 chief. This was one James Aitken, *alias* John
 Painter, a native of Edinburgh. Having been
 in his early years accustomed to a vagrant life,
 had gone through many different adventures,
 had enlisted as a soldier, deserted, and when
 charged by want, made no scruple of betaking
 himself to the highway, or committing thefts.
 Having traversed a great part of America, he re-
 turned imbued with the prejudices against Britain to
 a degree, that he at last took the extraordi-
 nary resolution of singly overturning the whole
 power of the nation. This he was to accomplish
 by setting on fire the dock-yards at Portsmouth,
 Plymouth, and afterwards the principal tra-
 ding towns of the nation. With this view, he in-
 duced with the utmost care those docks and o-
 ther places on which his attempts were to be
 made, in order to learn with what care they were
 guarded. This he found, in general, as negligent
 as he could wish; and indeed had he not been very
 efficient in the construction of his machines, he
 must certainly have done a great deal of mischief:
 as his attempts were only discovered by find-
 ing his machines, it was apparent that he had met
 with an abundance of opportunities. For some time
 the affair at Portsmouth passed for an accident,
 and was soon recollected, however, that a person
 had been seen loitering about the rope-house, and
 even been locked up one night in it; that he
 worked as a painter, and taken frequent op-
 portunities of getting into that house, &c. These
 circumstances exciting a suspicion that he was the
 incendiary, he was traced to different places, and
 at last found in a prison; to which he had been
 committed for a burglary. On his examination,
 however, he behaved with such assurance and ap-
 parent consciousness of innocence, as almost dis-
 concerted those who were authorized. At last he
 confessed to a confession by another painter,
 who was an American, and pretended to compas-
 sionate his case. This evidence was procured
 against him, but he still maintained his character
 to the very last; rejecting and invalidating the
 testimony of his false friend, on account of his
 meanness and treachery. He received his sentence

with great fortitude; but at length not only con-
 fessed his guilt, but left some directions for pre-
 venting the dock-yards and magazines from be-
 ing exposed to the like danger in time to come.
 Thus it appeared that the whole of this alarm of
 treason and American incendiaries, was owing
 to the political enthusiasm of a wretched vaga-
 bond. Still, however, it appeared that the French
 court were very well acquainted with many par-
 ticulars, relating to the state of this kingdom, and
 the movements of our squadrons, which ought
 by all means to have been kept secret. These
 treacherous proceedings were first detected in
 June 1780. One Ratcliffe, master of a cutter,
 gave information that he had been hired by one
 Mr Rogere, to carry packets to France, for which
 he was to be paid 20l. each time, and to have
 100l. besides at a certain period. Apprehending
 at last, however, that he might incur some dan-
 ger by continuing this employment, he gave in-
 formation of what was going on, to one Mr
 Steward, a merchant at Sandwich, by whom his
 last packet was carried to the secretary of state.
 After being opened and sealed up again, it was
 returned, and he was directed to carry it to
 France as formerly. This was the fate of several
 succeeding packets, though it was some time be-
 fore Ratcliffe saw the principal party concerned.
 At last this was accomplished by his complaining
 to Mr Rogere, that he had not been paid the 100l.
 according to promise. A meeting being thus pro-
 cured, it was found that the person who gave in-
 telligence to the enemy, was one M. Henry de la
 Motte, a French gentleman then residing in Lon-
 don. On searching his house, no papers of any
 consequence were found; but on his arrival,
 he being absent when the messengers first ar-
 rived, he threw some out of his pocket, unper-
 ceived by any body, as he thought. The papers,
 however, were taken up by the messengers, and
 gave plain indications not only of a treasonable
 correspondence with the enemy, but that he was
 connected with one Henry Lutterloh, Esq; a
 German, who then resided at Wickham near
 Portsmouth. This person being also apprehend-
 ed, not only made a full discovery of the treason-
 able correspondence with France, but gave abun-
 dant proofs of himself being one of the most de-
 praved and hardened of all mankind, lost to every
 sensation excepting the desire of accumulating
 wealth. His evidence, however, and other strong
 circumstances, were sufficient to convict M. de la
 Motte, who was accordingly executed, though
 the king remitted that dreadful part of his sen-
 tence of having his heart taken out alive, &c.
 During his trial, and on every other occasion, he
 behaved in such a manner as showed him to be
 an accomplished gentleman; and not only excited
 the compassion, but the admiration of every one
 who saw him. During the whole course of the
 war, only one other person was detected in any
 act of treason; and he appears to have been ac-
 tuated merely by mercenary motives, though La
 Motte and John Aitken probably acted from prin-
 ciple. This was one David Tyrie, a native of
 Edinburgh. Having been bred in the mercantile
 line, and engaged in a number of speculations
 with a view to gain money, in all of which he dis-
 covered

covered considerable abilities, he at last ventured upon the dangerous one of conveying intelligence to the French, of the ships of war fitted out in Britain, the time of their sailing, &c. For this he was apprehended in Feb. 1782. The discovery was made by one Mrs Askew, who passed for his wife, delivering a bundle of papers in a hurry to a school mistress, and desiring her not to show them to any body. Instead of this, however, she not only inspected them herself, but showed them to another, by whom they were sent to the secretary at war. By this, and another packet discovered by William James, who had been employed to carry it to France, Tyrie was convicted and executed in August 1782. He behaved with great resolution, and at last showed rather an indecent levity and unconcern, by laughing at the place of execution. The sentence not only took place in the dreadful manner appointed by law, but the crowd behaved with the most disgraceful and savage barbarity. "Such (says the account of his execution) being the singular conduct of many who were near the body, that happy was he who could procure a finger, or some vestige of the criminal!"—This unhappy man, while in prison, had, with his companions, contrived a method of effecting their escape, by working through a brick wall three feet thick, and covering the hole with a plank coloured like the bricks; but the scheme was discovered by the imprudence of Tyrie himself asking the keeper how thick the wall was.

(III.) ENGLAND, HISTORY OF.—ACT RESPECTING THE LEGISLATION OF IRELAND. On the 21st Jan. 1783, the house of commons met according to adjournment, and next day Mr secretary Townshend, after observing, that it was become necessary to prevent the possibility of any farther doubts being entertained, respecting the true meaning of the British parliament, in their proceedings of last session towards Ireland, moved, "That leave be given to bring in a bill, for removing and preventing all doubts, which had arisen, or might arise, concerning the exclusive right of the parliament and courts of Ireland in matters of legislation and judicature; and for preventing any writ of error, or appeal, from any of his majesty's courts in that kingdom, from being received, heard, and adjudged, in any of his majesty's courts in the kingdom of Great Britain." The cause of introducing this bill was as follows: When the establishment of the legislative and judicial independence of Ireland was under the consideration of the late ministry, two methods of doing it had been suggested: The one by renouncing what England held to be a right, but was ready to give up: The other by declaring that England, though it had exercised, had never been legally possessed of this right. The former of these modes, it was said, might give offence to the people of Ireland, who insisted that England had never possessed any such right: And to the latter mode of renunciation, it was apprehended, that the parliament of Great Britain would never consent. The measure of a simple repeal of the declaratory act of the 6th of George I, was therefore adopted, as best suited to the spirit of the people of Ireland, and the dignity of the Bri-

tish parliament: and though some zealous patriots seemed to think, that an absolute renunciation was necessary, yet an address was carried there through both houses, (with only a or 5 dissentient voices,) expressing their perfect satisfaction, and declaring that no constitutional question could any longer exist. After this, the parliament of Ireland proceeded to exercise their legislative powers, by enacting laws for regulating their judicial proceedings, and for confining the decisions of property to their own courts of law with power of appeal to the house of lords in Ireland only. Affairs were proceeding in this amicable manner, when a cause that had been removed by writ of error from Ireland to the court of king's bench in England, long before the appeal had been in agitation, and which the judges by the rules of the court was obliged to determine, was brought to a decision. This unhappy accident was eagerly laid hold on by many in Ireland, and the jealousy they attempted to spread was improved by the British ministry, who seized the opportunity, to show from this instance, that the measures of their predecessors had not given complete satisfaction, and thus to court the applause of the people of Ireland, by the additional security, which the bill now introduced would afford to their rights. The bill accordingly passed without any formal opposition; though it was marked, that as the parliament of Ireland had declared, that no constitutional question did any longer exist between the two kingdoms, it was neither consulting the dignity of the legislature of Great Britain, nor paying any compliment to the discernment of that of Ireland, to declare the doubts might still arise, and to pass an act to prevent them, unasked, and grounded on mistakes. The parliament of Ireland, by the repeal of the 6th of George I, were virtually invested with full powers to regulate every domestic inconvenience, according to their own judgement, and this they had now actually done, a bill for the purpose having received the royal assent. The officious interference of Great Britain now, so far from increasing the confidence which Ireland was willing to repose in her, was more likely, as was said, to produce the opposite effect, by authorizing groundless jealousy and distrust. Confidence was in its nature voluntary; a profusion of professions never did, nor ever would, confirm it. Mr Fox insisted, that "the repeal of the act of George I, was an effectual abandonment of the English right of legislation and judicature over Ireland. As such it had been accepted by the Irish government, and had given general satisfaction. He cautioned ministers against listening to discontents, that had no existence. It could not be expected, that measures, however good, would give satisfaction to every individual. It was necessary to stop at some point, which should be the *ne plus ultra* of concession. That stand should be made where equity and justice had already placed it. He spoke not as a foe to Ireland, for he declared, that, if we were in the most flourishing situation, he should think it better to give Ireland independence, if she wished it, than to maintain her dependence by the sword. He added that himself and his former colleagues in office had

ken the only effectual method to satisfy Ireland. he had advised the repeal of the 6th of George and he had authority to say, that it gave full satisfaction. If it had not done so, this bill would never effect it. Mr M'Donald expressing a wish to be informed, whether the legislative power of England over Ireland was to be so completely rendered, as in no supposable case to be ever resumed, Mr Secretary Townshend said, it was intended fully and irrevocably, and never more exercise or resume it. The bill was then passed *nem. con.*

(112.) ENGLAND, HISTORY OF.—MINISTERIAL INTERREGNUM, NEW MINISTRY, &c. The measure passed on the peace, by the resolutions of the house of commons on the 21st Feb. 1783; (see 108,) proved so severe a blow to the ministry, that the earl of Shelburne resigned his office of first commissioner of the treasury, and Mr Pitt declared publicly in the house, that he only held the place of chancellor of the exchequer, till a successor should be appointed. The consequence was, that a ministerial interregnum ensued, which continued till the beginning of April; a very unusual phenomenon in the British government. During this period, the kingdom remained in a state of no small disorder;—without any responsible government at home, the finances neglected, the military establishments not reduced, and the negotiations with foreign powers, which the critical conjuncture of affairs rendered peculiarly important, entirely at a stand. Various causes were assigned for the uncommon delay in appointing a new administration. Those, who wished to shift all blame from the court, alleged, that the chief obstacle arose from the mutual jealousy which subsisted between the newly allied parties in the coalition, which had recently taken place between Lord North and Mr Fox; and from the rivalries, which the respective members of each party, in adjusting their several pretensions, supposed, that the interval was employed in private intrigues with the individuals of different parties, and in attempts to form a new administration independent of the great leading characters: while others did not hesitate to affirm, that the failure of these attempts, the influence possessed by the lord high chancellor, whose dismissal was insisted on by the coalition, was the chief cause of retarding the new arrangement. Which of these causes, or whether any or all of them operated to produce the effect, we leave to future historians to determine; but all of these causes were not only publicly mentioned at the time, but often alluded to in the parliamentary debates. On the 19th March, Mr Coke, member for Northamptonshire, gave notice, that if an administration was not formed on or before the Friday following, he would move an address to the king on that subject. Rumours of an intended arrangement were immediately circulated, but the negotiations for that purpose being suddenly broken off, Mr Coke made his promised motion, on Friday the 24th, "That an humble address be presented to his majesty, that he would condescend to a compliance with the wishes of the people, by forming an administration entitled to the confidence of his people, and such as may have a

tendency to put an end to the unfortunate divisions and distractions of the country." This motion was received with almost universal approbation, though attempts were made to shift the blame on the candidates for power, and no small abuse was thrown out against the members of the coalition, which was smartly repelled by Mr Fox, with his usual abilities. The address was ordered to be presented by such members as were of the privy council. On Wednesday the 26th the comptroller of the household reported his majesty's answer, "That it was his earnest desire to do every thing in his power to comply with the wishes of his faithful commons:" and on Monday the 31st, Mr Pitt acquainted the house, that he had that day resigned his office. Being asked if any new arrangement was likely soon to take place, he replied that he knew of none, but concluded from the king's message, that the measure would not be unnecessarily delayed. This answer did not satisfy the house. It now appeared, that the care of the public money was left without any responsible minister whatever. Much difference of opinion prevailed with regard to the steps proper to be taken. The earl of Surry proposed the following resolution: "That a considerable time having now elapsed, without an administration responsible for the conduct of public affairs, the interposition of this house, in the present alarming crisis, is become necessary." Objections were made to this resolution; as too strongly worded, as not consonant to the practice of the house, and as implying that for some time past there had been no responsible ministry; whereas every minister was responsible for every part of his conduct, till the day he resigned. It was even said, that to declare *their interposition necessary*, in a case allowed to belong constitutionally to the crown, was little short of declaring, that the government of the country was at an end. The earl therefore withdrew his motion, and proposed in its stead, "That an humble address be presented to his majesty, to express the grateful sense the house entertains of the gracious intentions expressed in his message of the 26th inst. To assure his majesty, it is with a perfect reliance on his paternal goodness, and an entire deference to his royal wisdom, that this house again submits to his consideration the urgency, as well as the importance, of the affairs which require the immediate appointment of such an administration, as his majesty has given them reason to expect. To assure his majesty, that all delays, in a matter of this moment, have an inevitable tendency to weaken the authority of his government, to which this house is not more bound by duty, than led by inclination, to give an effectual and constitutional support. To represent to his majesty, that the confidence of foreign powers may be weakened by a failure of the ordinary means of a constant communication with them; That the final execution of treaties, with the important and decisive arrangements of a commercial and political nature, in consequence of a late revolution; that a provision for the heavy expences, and the important services voted; that the ordinary reduction of the forces, and the expences of a new establishment; that the settlement of national credit; seriously af-

feet by the critical state of the East India Company;—that *these*, with other important concerns, do severally, and much more collectively, require an efficient and responsible administration, formed upon principles of strength and stability, suited to the state of his majesty's affairs, both at home and abroad; and that, this house most humbly repeats its application to his majesty, that he will take such measures towards this object, as may become his most gracious disposition, and quiet the anxiety and apprehensions of his faithful subjects." The decency and propriety of this address were very generally acknowledged, but doubts were expressed, whether sufficient time had been allowed since the answer that had been returned to the former; and, this idea prevailing, it was at last agreed to postpone it for 3 days longer. Many invectives were thrown out during this debate, against the coalition; and the absurdity of expecting, that a permanent administration could be formed by persons so opposite in their principles and opinions, was insisted on with virulence. On the other hand the state of the country was insisted on as a sufficient vindication of that measure; and it was asked where or from what description of men, without the coalition of some parties or other, an efficient cabinet could be formed? It was asked, whether there were four persons of any note on the political stage, who had not widely differed on great and important points? If the violence, with which their former opposition had sometimes been carried on, was the chief objection against their present union, they surely had the greater merit, in consenting to forget those animosities. To argue that it was impossible for men who differed in opinion on some points, to act together cordially for the public good, was to argue against experience; and the most pointed personal evidence was adduced from the jarring political opinions of several of the leading ministers who had just resigned. At last on the 2d of April, a new administration was announced, of which the following persons composed the cabinet council:—The D. of Portland 1st lord of the treasury; lord North, and Mr Fox, secretaries of state; lord J. Cavendish, chancellor of exchequer; lord Viscount Keppel, 1st lord of the admiralty; lord V. Stormont, president of council; E. of Carlisle, privy seal; E. of Hertford, chamberlain, and E. of Dartmouth, steward of the household; lord V. Townshend, master of ordinance; Mr Burke, pay-master general; Mr C. Townshend, treasurer of the navy; Mr Fitzpatrick, secretary at war; Mr Wallace, attorney, and Mr Lee, solicitor general; and the E. of Northampton, lord Lieutenant of Ireland.

(113.) ENGLAND, HISTORY OF.—AMERICAN TRADE BILLS; PUBLIC LOAN; MR PITT'S PLAN OF REFORM, &c. The first object of importance, that engaged the attention of parliament after the change of administration, was the opening a commercial intercourse with the United States of N. America. By the prohibitory acts, which had passed previous to the war, all communication with that country in the way of trade, had been entirely cut off: and though it was the prevailing opinion in parliament that, those acts were virtually repealed, by the acknowledgment of the in-

dependence of the United States, yet in this new character, they became subject to other restrictions, which it was necessary to relax and modify. A bill for this purpose had been introduced by the late ministry; but during the various discussions which it underwent, difficulties of a complicated and important nature had arisen, that it never passed through the committee. In the mean time, no regulations whatever having been stipulated by the treaty of peace, (§ 10.) the commercial interests of Britain were suffering very materially; for not only a great number of vessels richly laden for America, were detained in the harbours, but there was no small danger of the market being pre-occupied by our rivals. In this emergency, the new ministers thought it not advisable to drop the old bill, and to pass two short ones; the one to repeal all the prohibitory acts, and the other to remove the necessity of requiring documents, and to lodge, for a limited time, a power in the hands of the king and council, to make such other regulations, as might be found expedient.—On the 16th April, the chancellor of the exchequer brought forward the bill for the current year, 1783. The sum borrowed was 12 millions. Eleven bankers, with whom the terms were allotted, had 700,000l. each; the rest was divided among the other bankers, the great trading companies, and the clerks of the public offices. The premium was 3l. 10s. per cent; but the stocks rising considerably in a few days after, the minister was censured, for the disadvantageous bargain he had made. He excused himself by saying, that he had only been 20 days in office; the late ministry had left the treasury without a shilling; the public service committed of no delay; these circumstances were known to the money-lenders, who had taken the advantage of them; and in a word, that a farther delay would have rendered the necessity of concluding a bargain on any terms the more urgent, the terms would doubtless have been raised upon him, had he not accepted them. On the 7th of May, Mr W. Pitt, made his personal motion, respecting a reform in the parliamentary representation. He introduced it by declaring that "he never felt more embarrassed or uneasy, than at that moment, when, for his country's good, he found himself obliged to lay before the house, the imperfections of that constitution, to which every Englishman ought to be brought up with reverential awe; a constitution, while it continued such as it was framed by our ancestors, was truly called the production of the most consummate wisdom. Raised by it to greatness and to glory, England had been at times envied and the pride of the world. Europe was taught by experience, that liberty was the foundation of true greatness; and that while England continued under a government perfectly free, she never failed to perform exploits that dazzled her neighbouring nations. But a melancholy series of events, which had eclipsed the glory of Britain, exhibited a reverse of fortune, which could be accounted for only on this principle, that during the last 15 years, there had been a departure from the principles of that happy constitution, under which England had so long flourished."

not for him to touch the venerable fabric: it stand in need of repair was sufficiently inholy: but the more he revered it, the more he wished to secure its duration, the greater he felt the necessity of guarding against its decay.

An Englishman who should compare the existing state of this country 20 years ago, with the state of humiliation in which she now is, would be convinced, that the ruin which he now sees, having been brought on by slow degrees almost imperceptibly, proceeded from something radically wrong in the constitution. Of the existence of a radical error, no one seemed to doubt. The house itself had discovered, that a corrupt influence was sapping the very foundation of liberty by corruption: The influence of the crown had been felt within those walls, and had not been found strong enough to stifle the sense of duty, and to over rule the propositions made in its name to the people. The house of commons, in its early parliaments, had been base enough to feed influence that enslaved its members; and thus at once the parent and the offspring of corruption. This influence had risen to such a height, that men were ashamed any longer to deny its existence; and the house had at length voted, that it ought to be diminished. Among the various expedients, that had been devised to bar the entrance of such influence, he had heard principally of three. One was to extend the right of voting for members to serve in parliament, which is now so confined, to all the inhabitants indiscriminately; so that every man, without the distinction of freeholder, or freeman of a corporation, should have a vote for a person to represent him in parliament: And this mode was thought, by those who patronised it, the only one consistent with true liberty in a free constitution, where every one ought to be governed by those laws only, to which they have actually given their assent, either in person or by their representatives. For his part, he utterly rejected and condemned this mode, which it was impossible for him to adopt, without libelling those renowned fathers, who had framed the constitution in the fullness of their wisdom, and fashioned it for the government of freemen, not of slaves. If this doctrine should obtain, nearly one half of the people must in fact be slaves; for it was impossible, that this idea of giving every man a right of voting, however fine it might appear in theory, could ever be reduced to practice. But though it were even practicable, still one half of the nation would be slaves; for all those, who were to be the unsuccessful candidates, cannot, in the strictness of this doctrine, be said to be represented in parliament; and therefore they would not be governed by laws to which they gave no assent, either in person or by representatives; consequently according to the ideas of the friends to this expedient, all those who vote for unsuccessful candidates must be slaves. Nay it was still harder with those who are members of parliament, who are made slaves also, when they are governed by laws, to which they not only have not consented, but against which they have actually voted. The expedient he had heard of, was to abolish the franchise, which several boroughs now enjoy, of

returning members to serve in parliament. These were known by the popular appellation of *rotten boroughs*. He confessed there was something very plausible in this idea, but still he was not willing to adopt it. He held these boroughs in the light of deformities, which in some degree disfigured the fabric of the constitution, but which he feared could not be removed without endangering the whole pile. It must be admitted that borough members are more liable to the operation of that influence, which every good man wished to see destroyed in that house, than those members who are returned by the counties; and therefore though he was afraid to cut up the roots of this influence, by disfranchising the boroughs, because he was afraid of doing more harm than good, by a remedy that might be worse than the disease, still he thought it his duty to counteract if possible that influence, the instruments of which he was afraid to remove. This brought him to the 3d expedient, which was to add a certain number of members to the house, who should be returned by the counties and the metropolis. The county members were taken from that class of gentlemen the least liable to the seduction of corrupt influence; the most deeply interested in the liberty and prosperity of the country, and consequently the most likely to pursue such measures, as appear the most salutary to it. This expedient appeared to him the most fit to be adopted, because it had the merit of promising an effectual counterbalance to the weight of the boroughs, without being an innovation on the form of the constitution. He would not say what number of members ought to be added, but in his opinion, it ought not to be under 100. It was true the house would then be more numerous, than he could wish; but still this were better, than that the liberties of the country should be exposed to destruction, from the baleful influence of the crown in the boroughs. He was not however without an expedient to reduce the number of members, even after this addition to nearly the present number. It was this—That whenever it should be proved before the tribunal established to try the merits of contested elections, that the majority of any borough had been bribed, that borough should then lose the privilege of sending members to parliament; the corrupt majority should be disfranchised, and the honest minority should be permitted to vote at elections for knights of the shire. By this expedient boroughs would be either preserved free from corruption, or else they would be abolished, and the number of members of that house reduced to its present standard." Mr Pitt then said, that he had drawn up 3 resolutions, which he would propose for their consideration: viz. I. "That it was the opinion of the house, that measures were highly necessary to be taken, for the future prevention of bribery and expence at elections." II. "That for the future, when the majority of votes for any borough shall be convicted of gross and notorious corruption, before a select committee of that house, appointed to try the merits of any election, such borough should be disfranchised; and the minority of voters, not so convicted, should be entitled to vote for the county in which such

borough should be situated." III. "That an addition of knights of the shire, and of representatives of the metropolis, should be added to the state of the representation." Mr Duncombe seconded the motion, and said the propositions should have his support, as they were agreeable to the wishes of his constituents, the gentlemen of the county of York. Mr Powys said, "before he consented to make any alteration in the constitution of that house, he desired first to have the existence of the evil proved. He ridiculed the extravagant ideas entertained by certain great reformers, and alluded particularly to the duke of Richmond's scheme, who, he said, disclaimed to regard the narrow limits of practicability, and insisted upon universal representation. In proof of this he read a part of the duke's letter to the Yorkshire Committee, some passages of their resolutions, and of those of the Constitutional Society, &c. These he quoted so as to make them exhibit an apparent assumption of more than ordinary self importance in the societies; but the few petitions presented shewed (he said) that the people were not very eager to adopt their ideas. If any reform were necessary, he added, it ought to come from a committee, and not in the shape of a specific proposition from a single member. The matter was too important to come so suddenly upon the house. He therefore moved the order of the day. Mr Thomas Pitt supported his hon. friend's motion, because it was specific, and less alarming than the many visionary schemes of vain speculators talked of out of doors. He said the borough influence was not without its merit: It had opposed the influence of the counties, when the knights of the shire attempted to carry the influence of the democracy too far, and build an unconstitutional power on the ruins of the monarchy. As to the propositions, he thought the number of additional knights proposed by far too many. If his hon. friend would reduce the number to one knight for every county, he would agree to that, as a mean of putting an end to the clamours of the people; but begged they would be given to understand, that the house would do no more. On this condition he would vote for the motion. Sir George Saville supported the resolutions, and insisted that all the distresses of the empire arose from a radical defect in the constitution, which the propositions were intended to rectify. The war for 9 years in America, he said, was the offspring of this corruption in the state. During all this time we had been carrying on a destructive war against our oppressed fellow subjects in that country, at the expense of not only 200 millions of treasure, but near 100,000 lives. And the minister, under whose auspices it was commenced and continued, instead of receiving the punishment so often threatened, not only retained his seat, but, after being a short time out of office, is now recalled to the councils of his sovereign. This Sir George ascribed to the undue influence of the minister of the day. Lord North denied the existence of the influence complained of, and insisted that he himself afforded a proof of its non-existence. The American war, which had been laid to his charge, had been often called the war of the crown, but very unjustly; for it was

undertaken to maintain the rights of the parliament and people of Great Britain. For this reason it was popular. If the influence of the crown had produced great majorities within that house, it could not have produced the almost unanimous approbation of the people without doors. But what made the war at last unpopular? Not a want of justice, but want of success: and its unpopularity soon effected the downfall of his administration. The house, having once taken a dislike to the war, soon got rid of it. Where was then the influence of the crown? Why did it not avert this blow? Why did it not keep a minister in office in spite of the voice of parliament? Such an influence could not interfere, for it did not exist. He himself was at once the proof and the victim of the power of parliament. When he enjoyed its confidence he continued in office. When he lost it, he ceased to be a minister. Rejecting therefore the idea that such an evil existed, he opposed all innovation. Mr Fox animadverted with great strength of argument on the reasoning of his colleague. He witheld the question had not been so narrowed, as the friends of reform were thereby disjoined. But though he objected to the specific propositions, he would vote against the order of the day, as that went to crush all reform. It had been said, that the constitution was, in theory, already quite perfect, though in practice it might appear otherwise. The contrary, paradoxical as it might seem, he would nevertheless maintain. It was, in his opinion, the most absurd thing on earth in theory, though its practice was consonant to sound sense. What, for instance, could be more absurd, than to say, that there should be 3 independent and equal states, one of whom was the governor and the other two the governed; and yet that no act of the legislature should be made without the agreement of these distinct and jarring powers? What could be more absurd, than to say, that one of the states should consist of a single person, and that person the governor, and that this single person's voice should be of equal force, with those of the millions he governed? Yet absurd as this theory was, nothing absurd appeared in the practice. In the benignity of the prince and the wisdom of his counsellors, discordant as these principles appeared, there was in the functions of government nothing of disorder. People therefore should not discredit theories, as wild or chimerical, because they concurred not with their own ideas. Were it not for theorists, the constitution, much as it was boasted of, would have had now but few claims to praise. What would we be now, but for our Harringtons, our Sydneys and our Lockes? To invigorate the constitution of government frequently is as requisite as to invigorate the body of every individual. We are every hour wasting, and every hour recruiting; so is the constitution. To talk of innovations (added Mr Fox) as a bugbear against reform, is what uncandid men have always done in politics as well as in religion. What are the reforms in the trials of contested elections? What is the law disqualifying custom-house officers from voting in elections? What is the bill which goes by the name of my hon. friend Mr Burke? What are all these but innovations in the constitution?

tion?—Away with the canting phrase. Single consideration is this:—Is any reforming, or not?—I think it is, and therefore con- sider the motion.” Mr Rigby spoke with his determination against all innovations. The advocate supported the specific propositions. The general motions of reform were brought forward, he objected to such loose proceedings; he thought the house might go as far as was proposed, with benefit to the country. Sir in Lewes conjured the house not to reject petitions of the people; and several other speakers spoke on each side. The total number of petitioners, it was argued, did not exceed 50. At half past 2 A.M. the house divided, there appeared, for the order of the day, against it 149; majority against Mr Pitt’s motions 144.

4.) ENGLAND, HISTORY OF.—FRAUDS OF MR POWELL AND BEMBRIDGE; NEW TAXES; A CORRUPT BILL, &c. About this period a fraudulent transaction of a singular nature, respecting public money, was brought under the consideration of the house of commons. Messrs. Hall and Bembridge, clerks of the pay office, had fallen under suspicion of gross misbehaviour, examined before the treasury board, and appearances were so strong against them, that Col. Hall, then paymaster general, dismissed them from their office. Mr Burke, however, upon his appointment paymaster general, re-instated them. This conduct being considered as reprehensible, Lord Newhaven, on the 24th April, moved in the house of commons, for a copy of the proceedings of the treasury board, respecting their examination, which was agreed to. But on the 27th, his lordship informed the house, that he had received prosecutions were ordered against them, which account he moved to have the order dissolved, that no proceeding might take place in the house, tending to bias the minds of the public against them before trial. Mr Pitt said, that the restoration of these gentlemen seemed to cast a reflection on the authors of their dismissal. Mr Burke defended their restoration, and said it was only his own act, upon which he had asked no credit, being responsible for it to his country; that he had so regulated the pay office, that there was no danger of the public money being misapplied. Mr Martin said, he could not help remarking upon the restoration of these gentlemen, *gross and daring insult to the public*. Mr Burke replied in a violent passion, that was prevented from being more than—“*It is a gross and daring*”—Mr Sheridan, who pulled him down on his knees.

Sir Edward Ashley said, that to restore perjured witnesses with a crime, amounting to public fraud, was a great slight for the opinion of the country. Mr Fox endeavoured to soothe the house, but, said, an inquiry must certainly take place, but his honourable friend, thinking that the inquiry ought not to precede inquiry, had referred them to their places, determined to suit the subject to the issue of the inquiry. Several members spoke, and the business with some delay was dropped at this time, but resumed on the 19th May; when Lord Newhaven being assured, that a prosecution was soon to com-

mence, moved, that the order for producing the minute be discharged. This produced a long and warm debate; after which, upon a division, there appeared for discharging the order 161; against it, 137. But the 2d day after, this business was once more brought before the house by Mr Rolle, who begged the paymaster to inform the house, whether he still intended to keep Messrs Powell and Bembridge in office? Mr Burke, in reply, assured the house, that, in restoring Messrs Powell and Bembridge, he was actuated solely by motives of justice. He was ready, however, to give up his opinion, when 137 members had appeared to censure his conduct. To convince the house, however, that he had not restored them upon slight grounds, and that no injury could arise to the public from their restoration, he stated the following facts: When first appointed paymaster, he went into office with a most fixed resolution to introduce into it every kind of reform, that he should find necessary and practicable; and had it not been for the assiduity, fidelity, and industry of these two gentlemen, he never could have introduced the reforms which he had now established. The balances which formerly lay in the paymaster’s hands, amounted *communibus annis*, for the last 20 years, to L.600,000; and in some years were as high as L.1,100,000. These sums, thus lying in the paymaster’s hands, brought no *superlucration* to the public; and yet at L.4 per cent were worth L.24,000 per annum. This was formerly the avowed prerequisite of the paymaster, so that with the salary, the place used to be worth L.27,061. Here was a saving of L.24,000 a-year to the public. Some other large sums, which formerly brought no *superlucration* to the public, now effected a saving of L.23,000 a-year; so the whole saving already accruing to the public, from his plan of reform in the pay office, amounted to L.47,000 per annum. Now whatever merit he could plead in this business, it was not exclusively his own; he must share it with the two unhappy gentlemen, whom he believed to be incapable of *intentionally* doing any thing contrary to the laws of their country. He was not surprised, indeed, at any confessions they might make: From the condition in which he had seen Mr Powell, when he asked him some questions, he found him in such trepidation, so weak in the nerves, and so little able to speak to any thing not merely in the way of his business, that he was convinced he could, by cross questions, make him confess himself guilty of treason, rapine, and murder. As to their power of injuring the public, he maintained it to be impossible; for, from the paymaster down to the lowest clerk, not one could cheat the nation of a single shilling; nor could a shilling be got by any of them out of the bank except by forgery. In fact there was no money in the bank to be got at; for he made it a point to keep balances down; and on this very day, the balance in his name in the bank was only L.8, and when he left the office it was 0. It was necessary to act with an even hand; neither on the one hand to let balances accumulate, nor on the other, to want money to give to the agents, lest the army should mutiny for want of pay. In this nice business, he had received the greatest assistance from Mr Powell. Was it then to be wondered

at; that he should wish to continue to avail himself of his knowledge, especially when, if he was the greatest villain on earth, he could not embezzle the property of the public. Nay, his great fortune was security for his honesty, though in his present situation a beggar would hardly envy him. As to Bembridge he had nothing to do with the cash; his business was merely to state the accounts, and a most arduous business it was. This man was poor; his only means of livelihood was his office; and his abilities, zeal, and fidelity in it, he had fully experienced. Was it then surprising, that he should be unwilling to lose the assistance of a man, who, in conjunction with Mr Powell, had enabled him to make reforms so useful to the public? However, he would abide by the judgment of the house. Mr Rolle thought this answer not satisfactory. Mr Burke said, he had forgot to tell the house, that Mr Powell had tendered his resignation, and that he had accepted it, and that Mr Bembridge had also made frequent offers of resignation: It rested with the house, whether he should accept it. After some farther conversation, it was understood, that Mr Burke would accept of his resignation; but he declared, that he would keep both places vacant for them, in hopes that they would be acquitted."—But these hopes of Mr Burke's were disappointed; for Mr Powell, on the 26th of May, gave too decisive a proof of his high sensibility and the weak state of his nerves, by cutting his jugular artery in his bed-chamber: And on the 18th July, Mr Bembridge was brought to trial before lord Mansfield for neglect of duty, in having connived at the concealment of certain items in the account chargeable to the late lord Holland, as paymaster general, to the amount of 48,799l. 10s. and a fraction; when the jury, in 15 minutes, returned a verdict, finding the defendant *guilty*. Mr Bembridge was, on the 22d of Nov. sentenced to suffer 6 months imprisonment; to pay a fine of L.2560 (which was L.40 less than he had received as his fees on lord Holland's account), and to lie in jail till the fine was paid. On the 26th of May, in a committee of ways and means, lord J. Cavendish opened the budget. The objects of taxation were bills of exchange; receipts; wills and legacies; bonds, law proceedings, admissions to inns of court, &c.; stage coaches; turnpike roads and inclosures; quack medicines; carriages; registers of births, marriages, and deaths; weights and measures; and an additional duty on postages; all of which, after some opposition, particularly to the receipt tax, passed.—On the 5th June, in a committee on the Scots corn petition, Mr Dempster presented a report from a committee above stairs relative to the state of the crops in Scotland; from which it appeared, that the distress of the poor in many of the northern counties, in consequence of an almost total failure of the crop, was shocking to sensibility. The people had subsisted chiefly on pease procured from England; but this supply was too scanty. He then moved for leave to bring in a bill to allow the importation of corn into N. Britain for 4 months from the 3d of Sept. next. The motion was seconded by the marquis of Graham, and objected to by Sir Jos. Mawbey, but supported by lord J. Cavendish and Sir Adam

Ferguson; after which it passed with lord John's amendment of inserting the word "foreign" before corn. Mr Dempster next moved an address to majesty, stating the distress of Scotland; and moved him to grant such relief as should seem meet, assuring him that the house would make good expence, which was agreed to.

(115.) ENGLAND, HISTORY OF.—D. OF RICHMOND'S MOTION RESPECTING THE CUSTODY OF THE GREAT SEAL. PETITION OF THE QUEEN AGAINST THE SLAVE TRADE. On the 3d of July 1783, the D. of Richmond called the attention of the house of peers, to an object, which he conceived might materially affect the administration of public justice, viz. the custody of the Great Seal, and the practice of committing it to the custody of judges, of which an instance then occurred. The motion was as follows: "That putting seals in commission *durante bene placitis*, and appointing judges commissioners with large salaries and perquisites, to be received by them for the existence of a commission, originating as it solely dependent on, the will and pleasure of the crown, tended to invalidate an act of the 13th William III for securing the independency of judges. After declaring, that he meant nothing personal to the present commissioners, he entrusted largely into the nature of the independency of judges. To secure this great object, two things were necessary, viz. 1st. That their offices should be independent of the will of the crown; and 2dly, That their salaries should be ascertained. By the former, their fears were effectually removed; by the latter, all temptations from the crown could only be done away. The act of 13th William III. was intended to secure both these objects, and consequently, to give 3 judges, selected in favour, the great emoluments according to the orders of the great seal, in addition to their salaries as judges, was in direct opposition to the spirit of that act, placed them immediately within the influence of the crown, and consequently tended to diminish their independence. But the motion he said, had not stopped here. Another inconvenience of the same sort had arisen out of it, viz. the commission by which the chief justice of the king's bench sat as speaker of the house of lords. This commission, he knew, was of long date; but still it was a mode of reward dependent on the will and pleasure of the crown, and therefore, in opposition to the design of having the salaries of judges fixed. He mentioned another matter which deserved their consideration;—the impropriety of judges sitting at all in that house. He did not say that the highest honours should not be open to that profession, but that while peers sat on the bench as judges, they should abstain from exercising their privilege from voting in the house as long as they sat there, they were necessarily legislators, and almost unavoidably became political characters, which, in the opinion of the best writers on civil government, were utterly inconsistent with that of judge. Another reason, why he thought the lord chancellor, lords commissioners, and lords chief justices, ought not to vote in that house, was, that by so doing, they were obliged to sit in judgment on *their own* decrees, and as it were to try themselves. He said, he had seen

it boasted, that lord Hardwicke never had his decrees reversed, while he sat on the bench. This he had always considered as no merit to that learned peer, but as a fact proved too much. Did their lordships think lord Hardwicke so infallible, that, during the great time he presided in the court of chancery had never given an erroneous judgment? they not rather concur with him, that the reason, why none of his decrees were reversed, was, the great influence a lord chancellor of Hardwicke's abilities must always possess in cause? In support of this opinion, he desired lordships to remember, that when Mr Hennessy was lord keeper, he had several of his decrees reversed; but when he was created a peer, and became as lord Northampton, by having the opportunity of talking to their lordships about his decrees, no more reversals were heard of. In all cases of appeal, it was for the most part customary to give the judgment to the law lords: The propriety, therefore, of trying over again causes themselves had adjudged, needed, he thought, no farther argument. The motion being refused, to, as throwing a direct censure on the appointment of commissioners, it was withdrawn, and the following substituted in its stead: "That a committee be appointed to take into consideration, the independency of the judges, and such farther regulations, as may be proper for securing the same." After some debate, in which Mr. Loughborough replied to the D. of Richmond, the motion was carried without a division.

The duke's motion was opposed chiefly on the ground of its having no basis; on no grievance alleged for which the remedy was sought. The real grievance was indeed supposed, but its remedy was not proved. The practice had long obtained uncensured, whenever the crown had right proper; and experience had not shown any inconvenience to have resulted. A theory, without having for its object a practical improvement, should shew what is amiss, and point out the manner in which it is to be reformed.—On the 17th June, Sir Cecil Wray, presented a petition to the house of commons from the people called Quakers, setting forth, "that the petitioners in their annual assembly, having solemnly considered the state of the enslaved negroes, considered themselves engaged, in religious duty, to lay before the house, as a subject loudly calling for the interposition of the legislature; and they stated, that a nation professing the Christian faith should so far counteract the principles of humanity and justice, as, by cruel treatment of this oppressed race, to fill their minds with prejudices against the mild and beneficent doctrines of the gospel; and that under the countenance of the legislature of this country, many thousands of those our fellow creatures, intitled to the natural rights of mankind, are held, as private property, in cruel bondage; and the petitioners being informed that a bill for the regulation of the African trade is now before the house, containing a clause, which reserves the officers of the African company from

exporting negroes, the petitioners deeply affected with a consideration of the rapine, oppression, and bloodshed, attending that traffic, humbly request, that the said restriction may be extended to all persons whatsoever," &c. Lord North, after paying several just compliments to the petitioners for their humanity, expressed his fears that it would be found impossible to abolish the slave trade, as it had, in some measure, become necessary to almost every nation in Europe: And as it would be next to an impossibility to induce them all to give it up, and renounce it for ever, so he was apprehensive that the wishes of the humane petitioners could not be accomplished. Sir Cecil Wray said, he went heart and hand with the petitioners, and wished something might be done towards abolishing a traffic, which disgraced humanity. His motion that the petition lie on the table was agreed to.

(116.) ENGLAND, HISTORY OF.—EAST INDIA AFFAIRS; SIR T. RUMBOLD'S TRIAL; MR PITT'S REFORM BILL, &c. During the whole of this session, the affairs of the East India company were objects of the unremitting attention of the two committees appointed on that business; but the unsettled state of the government prevented any effectual measures from being taken in consequence of their reports. In the course of their investigations, however, appearances of guilt had been discovered against Sir Thomas Rumbold, a man who, though originally in no higher station than that of a shoe-black, had returned from India with an immense fortune, and been knighted. A public prosecution had been commenced against him two years before, and a bill of restraint had passed to prevent him from leaving the kingdom, or alienating his property. On the 2d June, 1783, the lord advocate, observed, in the house of commons, that Sir Thomas Rumbold having finished his defence, it was now the duty of the house to take the whole of the evidence into consideration; but, as the season was far advanced, he moved for a bill to continue the proceedings and the restraining bill against him in their present state, notwithstanding any prorogation or dissolution of parliament. After some conversation, the motion passed, and the bill was brought in and agreed to.—On the same day, Mr Pitt brought in a bill for regulating the public offices; and said, the purpose of it, was to embrace all the objects pointed out in the king's speech at the opening of the session. On the 17th, he moved the house to resolve itself into a committee on the bill. Lord John Cavendish opposed the motion, alleging the bill was useless, and that all its objects might be answered without it, as the regulations necessary in the offices might be established by the heads of these offices. Mr Pitt expressed his surprise at this last assertion, and to convince the house, that abuses did exist in several public offices, and that the heads of these offices were not the most fit persons to correct them, he stated the following facts:—In the pay office, under the name of gifts, two clerks, whose salary is only £240 each, had received in one year, the one £2000 and the other £2500, and yet this happened in an office, where the commissioners of accounts had been told no fees were taken. In the post office, the incidental

tal expences were enormous. The secretary had 2½ per cent commission on packets provided for those taken or destroyed. Under this head of packets, the nation, this very last war, had paid £120,000, and thus the secretary, whose salary is only £500, made £2500 a-year by this commission. The noble lord in the blue ribbon, (lord North) had cost the public the last year he presided at that board £1340 for stationary ware! He was surprised how such a bill could be run up; but, when he read the particulars, he was astonished it had not been ten times as much; for he found in one article a charge of £350 for *whip-cord*. Above £10,000 had been laid out on his lordship's house in Downing Street, and something near that sum on the house at Bulby Park. There were charges of £600 a-year for stationary consumed by the two secretaries of the treasury; and about £100 for each of the lords of that board. There were astonishing abuses in various offices, under the articles of coals and candles: Many of the officers supplied their houses in the country with these articles; and many of them had charges for their furniture foisted into the bills under colour of *stationary wares*. On the whole, Mr Pitt expected, that, by this bill passing, there would be a saving of £40,000 a-year to the public.—Lord North vindicated himself from these charges; saying it was the first time he had ever heard of such a charge as £350 for whip-cord, and that he should be surprised if such an article amounted even to £10. He affirmed, that he had given the most positive directions, that no stationary ware should be delivered for his use, without express orders from his private secretary: But he begged the house would not compare the consumption of stationary ware by a first lord of the treasury, with that of a private individual; for he was obliged to have a private secretary and 2 or 3 clerks almost constantly employed. But he owned, that as the treasury was served by patent, it was not served so cheaply as it otherwise might be. As to the expences of the houses in Downing Street and Bulby Park, he proved from the reports of the Board of Works, that they were both in a ruinous state, and that no unnecessary expence had been incurred in repairing them. Mr Fox vindicated his friend, and arraigned the conduct of the late treasury in having suffered their own friends, when in office, to enjoy their full fees, while they cut off from their successors all possibility of having any. After pointing out several disgraceful practices, particularly fees on passports, which had been doubled and quadrupled, in proportion to the number of the powers we were at war with, to the amount of £30, though our enemies themselves charged nothing for them, he said, he would not oppose the bill, though he thought it totally unnecessary. Mr Burke blamed Mr Pitt from prying into the *little perquisites of little men in little offices*, while he suffered the greatest abuses to exist in the offices under his eye, when he was in the exchequer. He said, he seemed to have that nice olfactory nerve, which could smell a ball of horse dung 1000 miles off. but was not affected by the stench of a dunghill under his window. On the 19th, the bill was passed, but was afterwards thrown out by the house of

lords. On the 23d June, the house was informed by a message from the king, that £50,000 was to be settled on the prince of Wales, out of the civil list; but that £60,000 would be necessary as a temporary aid, to equip him on his outfit in life. This sum was accordingly voted by both houses, and an address of thanks presented to his majesty. On the same day, lord J. Cavendish moved for leave to bring in a bill for the better regulation of the offices in his majesty's exchequer, which was agreed to; and on the 4th of July, the committee on that bill, he proposed, that the interest of the then auditors, tellers, &c. for the year, the salaries of these offices should be taken, and certain, as follows: the place of auditor £4000 a-year; each tellership £2700, deputy of the tellers £3000, the place of deputy teller of the tellers £1000; that of deputy to the tellers to be abolished; the deputy to the deputy tellers £800 and the receiver under him £1000. Mr Fox said, the principle of the bill was so much to reduce the salaries of these offices, as to prevent the emoluments arising from them from increasing with the public burdens, and the dangers of them from becoming rich in proportion as the public should grow poor. These regulations, after some debate, were severally adopted, and which it was estimated, that there would be saving to the nation of about £17,000 a-year in peace, and £40,000 in war. On the 11th of July, a motion was made and carried, for adjourning the farther consideration of the bill of penalties against Sir T. Rumbold, &c. to the 1st of Oct. by which means the whole proceeded to the ground, and was never afterwards resumed. That a bill, the result of long and laborious inquiries, a bill introduced, received, and passed upon by the house with so much solemnity, should have been suffered thus to fall to the ground, a circumstance on which we are at a loss to comment. What impression Sir T. Rumbold's defence made upon the house, we cannot determine, as no question was put upon it. It would be to presume that he was guilty, because he escaped of indemnity without acquittal; yet he could be pronounced innocent, because his accusers failed to prosecute him to conviction. The proceedings against him had indeed operated as no punishment, and perhaps this consideration led the house to let the bill drop. But by this measure the public were deprived of the only interest they had in the prosecution,—the acquittal of an innocent person, or the example of a punished delinquent. Thus, however, ended the first attempt made by this parliament to punish British delinquency in the E. Indies. The remainder of this session, which was closed on the 1st of July, was occupied about relief to the American loyalists, half pay to American officers, passed to lord Rodney and general Elliot, and sum owing by public accountants not accounted for; which were stated by Mr Pitt to amount to no less than 44 millions.

(117.) ENGLAND, HISTORY OF.—Mr Fox EAST INDIA BILLS. Parliament met on the 11th Nov. 1783, when the two houses were informed in the speech from the throne, of the treaty of peace being concluded with France, Spain, and America.

merica, (§ 107,) and that preliminary articles of the East India company's affairs were stated as the reason of their being called together after short recess, and they were told that these would require their utmost exertions, wherein it was expected the fruit of their important inquiries would appear. Addresses were moved in the usual form, and unanimously agreed to; though not without reproaches against the principles on which the administration had been formed, and remarks on its having forced their way into the service of the crown. Messrs W. and T. Pitt animadverted the inconsistency of the ministerial side of the House, in voting an address of thanks to the king, having concluded treaties of peace, the transcripts of those very terms, which they had before deemed inadequate and dishonourable. Mr Fox declared that the definitive treaties were an exact transcript of the parliamentary articles; and insisted, that the signing of the latter had pledged the faith of the nation for the signing of the former, and rendered it a matter of necessity, rather than of choice. On the 18th Nov. Mr Fox moved for leave to bring in "A bill, for vesting the affairs of the E. India Company, in the hands of certain commissioners; for the benefit of the proprietors, and of the public:" and also, "A bill for the better government of the territorial possessions and dependencies in India." By the mover, he proposed to enact, "That the whole government and management of the territorial possessions, revenues, and commerce of the company, together with all the powers and authorities now vested in the directors, or in the general court of proprietors, should be vested in 7 directors, for and during the space of 4 years. That the sole purpose of ordering and managing the commerce of the said company, 9 assistant directors, being proprietors, each of 2000l. capital stock, should be appointed to act under the directors aforesaid. That all vacancies in the office of the directors should be filled by his majesty, and that the vacancies in the office of the assistant directors should be filled by a majority of the proprietors, at an election by open poll. That the assistant directors should be removable by the directors, the cause and reasons for such removal being entered on their journals, and signed by their respective names; and that the directors should be removable by his majesty, upon an address of either house of parliament." The bill then provided certain regulations relative to the official proceedings of the directors; and enumerated certain disqualifications, which should render any person incapable of becoming a director, or assistant director. It then proposed to enact, that the directors should, once in every 6 months, lay before a general court of proprietors, an exact state of the mercantile concerns of the company; and that before the commencement of every session, they should lay the same, and other accounts therein stated, before the commissioners of his majesty's treasury, to be by them laid before parliament. Authority was then given to the directors, "to remove, suspend, appoint, or restore, any of the officers in the company's service, either civil or military. It next

provided for "the speedy and effectual trial of all persons charged with any offences committed in India; and for the prevention of all persons so charged, from returning to India, before a due examination of the matters charged shall be had; and required from every director, before whom examination into the subject matter of such charge shall be had, to enter into the journals, and subscribe with his name, the specific reasons on the particular case; for the opinion or vote he shall give thereon." It further provided for "a speedy decision upon all differences or doubts, which might arise among the members of their government in India;" and directed, that "in case such a decision shall not be had within 3 months after the account of any such difference or doubt shall be received, the directors shall enter on their journals their reasons for not coming to such a determination." It then directed, that "on complaint of any breach of treaty, injury, wrong, or oppression, committed against any native prince in India, or if any such wrong should appear on any part of their correspondence, the directors should, as speedily as may be, enquire into, and do full and complete justice upon the same. It then proposed to enact, that the directors, and assistant directors should be incapable of holding any office whatsoever in the service of the company, or any place of profit from the crown during pleasure; and also, that the directors under this act, should not be thereby disqualified from being elected, or sitting and voting as members of the house of commons. And lastly, that the assistant directors should be allowed a clear yearly salary of 500l. from the company."—By the 2d bill, (which Mr Fox introduced on the 26th Nov.) "the powers granted to the governor general and council, by the 13th Geo. III. were more fully explained, and strict obedience to the orders of the directors enjoined. The delegation of the powers of the council general, or of any presidency, was prohibited; the revision of all proceedings in special commissions directed; and the regular communication of all correspondence in India provided for. It forbid the exchange, or the acquisition, or the invasion, of any territory in India, or the forming any alliance for such purposes, or the hiring out any part of the company's forces, by the council general, or any presidency. It prohibited the appointment to any office of any person removed for misdemeanour; and the letting out to hire any farm, or other thing, to the servants of any person in the civil service of the company. It abolished all monopolies in India. It declared the acceptance of all presents to be illegal with certain penalties; and made such presents recoverable by any person for his own sole benefit. It secured an estate of inheritance to the native landholders, and provided against the alteration or the increase of rents. It directed, that princes engaged to keep up or pay troops for the service of the company, or paying tribute to them, or under their protection, shall not be molested in the enjoyment of their rights. It provided for the punishment of offences committed in their territories. It prohibited the servants of the company to collect or farm their revenues, or to acquire mortgages, or have any pecuniary transac-

tions with them; and secured the right of succession according to the laws of the country. It also prohibited them from farming any lands of the company, or residing for more than a certain term, in any of the company's settlements; and it provided for the protection of any other princes or zemindars dependent upon them. It prescribed a mode for adjusting the disputes between the nabob of Arcot, and the raja of Tanjore, or between them and their British creditors. It directed, that the dispossessed polygars should be restored. It explained the powers granted by the 13th Geo. III. to the council general over the other presidencies, in matters of war, peace, and treaties. It disqualified the agents of any protected prince, and all persons in the service of the company, from sitting in the house of commons during their continuance in such employment, and for a certain time after quitting the same. It lastly directed, that all offences against this act may be prosecuted in the courts in India, or in the court of King's Bench."—Such was the substance of these two celebrated bills: simplicity, efficiency, and responsibility, are evidently the principles on which they were formed; nor does it appear, that during the course of their progress through the two houses of parliament, their merits, as a system for the government of India, were ever controverted or denied, even by those who opposed them with the most violent acrimony. Mr secretary Fox introduced the first of these bills on the 18th Nov. by a speech of 2 hours and 10 min. wherein he showed the absolute necessity of remedying the many abuses that had crept into the government of the East India Company's territories. These had been so severely felt, that parliament had instituted inquiries by which the sources of them might be discovered, and proper remedies applied. Committees had been appointed; their researches had been pursued with uncommon industry, and their reports contained information so complete, that perhaps the like had never been laid before parliament. The state of the Company's finances were truly deplorable: They had last year applied to parliament for leave to borrow half a million on bonds; they had petitioned for 300,000 l. in exchequer bills; and for the suspension of a demand on them by government for 700,000 l. due for customs: They owed 11,300,000 l. and had stock in hand only to the amount of about 3,200,000 l. which left a debt of 8 millions, a sum highly alarming, when compared with the capital of the proprietors. Government must, therefore, either step in, or the company must be annihilated. Gentlemen must not be led away with the idea, that the public had no right to take upon themselves to control the government of the company's settlements. The public had a greater interest in them, than the company itself. The whole amount of the dividend to the proprietors was only about 2,6,000 l. whereas the nation derived from the customs paid by the company, about 1,300,000 l. The people of England had therefore a much greater stake in the business, than the proprietors. The prosperity of the company was so closely connected with that of the state, that the credit of the former could not be injured, without giving a shock to that of the

kingdom. If the bills for two millions should return protested, what would the world say, that the people of England were bankrupt, or that they would not have suffered the bankruptcy of a company, which paid them 1,300,000 l. a year? The credit of the nation was therefore deeply interested in their support. He then said it was his intention, in the bills moved to be brought in, to authorise the lords of the treasury, to consent that the directors shall accept the bills now on their way to England, though the nation would thus be liable to pay the whole, if the company should not be able to take up the debt. Thus he hoped to save the sinking credit of the company. He ascribed all the misfortunes of the company to their want of control over their servants; and to the ambition, temerity, turbulence, and rapacity of their servants, in plunging the company into a ruinous, bloody, unjust, and unprovoked war. He instanced in the case of Cheyt Sing, zemindar or prince of Benares, which afforded an instance of breach of public faith, which would forever blot upon the character of the British nation. The territories of that prince had been declared to be vested in him, on condition of paying to the nizier a certain stipulated tribute. The nizier afterwards entered into an agreement with the company's servants, by virtue whereof the vassalage of the rajah of Benares was ceded to the company. Governor Hastings, on that occasion, wrote to the English resident at Benares, authorising him to assure the rajah, that no farther tribute should be exacted, nor should it on any future change of government be enlarged. Yet, contrary to the very tenor of his letter, Mr Hastings called upon Cheyt Sing during the war for 5 lacks of rupees. They were paid. A 2d requisition for a similar sum was made, and complied with; as was also a 3d. The governor made a 4th demand of 5 lacks, but the prince was now not able to comply with it; whereupon the governor, hearing that the money could not be procured by fair means, went in person into the territories of Benares, and seized them for the company's use; and thus the unfortunate prince, driven from his dominions, was at this time a wanderer and a vagabond in the world. The affair of the Begums of Oude was another case, in which the honour of the nation had been wounded. These two princesses were the mother and grand-mother of the nizier of Oude; and the lands assigned to them for their support had been guaranteed to them by the company; and yet, notwithstanding this guarantee, the nizier was permitted by Mr Hastings to dispossess these princesses, and strip them of their dower. The article of presents, too, was a ground for infinite abuses. By law no servant of the company can receive any present whatsoever from any prince, or native of India. If any such presents should be discovered to have been received, the law immediately vested it in, and made it the property of the company; that the directors or proprietors might have an interest in discovering these presents. But these presents were inexhaustible things; for many princes, who had declared themselves unable to pay their just debts to the company, were nevertheless able to make very large presents to the governor general, &c. &c.

Hastings

Hastings had got as a present at one time, 700,000*l.* from the nabob of Oude, though that prince had declared his inability to pay the usual tribute to the company. This was a very convenient way for these princes to pay their debts; for by making sure friends of the company's servants, they were pretty sure, that their debts would either be wholly remitted, or the demand of payment adjourned to a distant day. Thus these presents were in every sense mere instruments of corruption. The Rohilla war was another proof of the lengths, that the company's servants may carry injustice. The rajah of that country was persecuted with fire and sword, and his country laid waste, for no other reason, that could be discovered, but because it always had been a perfect garden. The Mahratta war was another source of calamity to the company. Mr Fox would not say, that it was begun by Mr Hastings; it certainly took its rise from the presidency of Bombay; but it was adopted by him; and he could not say that the terms of the peace were such, as that the merit of having made it could outweigh the demerits of engaging in the war. Certain it was, that this treaty was infinitely less advantageous to us, than that of Pooranpur which had been broken. Having stated these and various other grievances, he next pointed out the remedies, he intended to apply by the bill, (above recapitulated,) and called upon every true friend to Britain to support his motion; declaring that he thought it his duty to risk his own political ruin, to save his country.

(118.) ENGLAND, HISTORY OF.—SUBSTANCE OF THE DEBATES ON MR FOX'S INDIA BILLS; AND LIST OF THE SPEAKERS ON EACH SIDE. Mr Fox's motion was seconded by Col. North, but opposed by Mr W. Pitt; who, though he admitted the necessity of the interference of parliament in the affairs of the E. India Company, said, that the chartered rights of British subjects, confirmed by acts of the British legislature, could not be violated but by a breach of the constitution. Necessity was the common plea of tyranny, to which government had recourse on all occasions, when wanted to oppress men and bring them to subjection. To reform the abuses of any government, he argued, was there a necessity to annihilate the very existence of its constitution? By annihilating the constitution of the E. India Company, established on the most sacred bonds of civil government, you shake the fabric of the British constitution to the foundation; you at once destroy the distinctions of property, and establish despotic power in a limited government. If charters from the crown, confirmed by acts of the legislature, are to be dealt out to-day, only to be refused, new-modelled, and sold again by the servants of the crown to-morrow, no greater state of tyrannic power can be alleged against the servants of the company, to authorise the severities with which they were threatened. Not to mention the great increase of that undue influence of the crown, which the right hon. gentleman appeared lately so anxious to diminish, the measure threatened danger to liberty, destruction to commerce, and the most alarming consequences to national credit. Gov. Johnstone treated with his usual asperity the measures that ministry had pur-

sued to distress the E. India company; though he applauded the principles of justice and humanity that formed the basis of the bill, so far as it respected restitution to the native princes of India, and the establishment of the zemindars and poligars in their farms at the old rents. He concluded with a panegyric on Gov. Hastings. Mr Fox begged gentlemen to recollect, that the character of Mr Hastings was not involved in the consideration of the bill. The motion being carried without a division, the bill was read a first time on the 20th Nov. and appointed to be read the 2d time on the 26th. On the 24th a petition was presented against it from the proprietors, and on the 25th another from the directors, praying to be heard by counsel, which were ordered to lie on the table. On the 26th, Mr Fox brought forward his 2d bill, (above recapitulated, § 117.) for the regulation of the affairs of the E. India company, which was read, and ordered to be read the 2d time on the Tuesday following. To avoid prolixity, we shall here give a summary view of the chief arguments used, in the various debates on both bills, and by both sides of the house, without particularizing the speakers, of whom we shall subjoin a list. The arguments urged against the bills were drawn from two sources: 1st, The arbitrary defeazance of the chartered rights of the courts of proprietors and directors, without a justifiable plea of necessity: 2dly, The dangerous power lodged in the hands of the new commissioners. On both these grounds, the advocates for the bills joined issue with their opponents. To substantiate the grounds of necessity, the supporters of the bills argued, that the phrase *chartered rights* was full of affectation and ambiguity: That there were *two* kinds of *charters*; the first when the natural rights of men were confirmed by some public deed, such as the charters of king John and king Henry III. The 2d sort were formed on principles the very reverse of these, for the purpose of suspending the natural rights of mankind at large, to confer some exclusive privileges on particular persons. Such were commercial charters; and such charters were therefore in the strictest sense voidable, whenever they substantially varied from the purpose of their existence. In conformity to this, parliament had actually passed several acts, all evidently infringing on the company's charter. The act of 1773, for depriving 500*l.* stock-holders of their votes; the acts of 1778 and 1781; the bill brought in last session by the chairman of the secret committee; were all clearly violations of the company's charter. It had been admitted on all sides, that the company, under its present constitution, was totally inadequate to the government of their immense territorial acquisitions; and it was asked, how it was possible to attempt any regulation without violating the company's charter?—Had not even those persons who now affected to feel so much horror at this infringement of charters, themselves exclaimed against *all palliatives and half measures*, and called loudly for a complete and well digested system, that would embrace every part of the government of India?—Yet now these very men, when such a comprehensive system was brought forward, changed their tone, and softened down

their mighty plan to the calm and moderate proposition of *some salutary regulations*.—On the other side it was contended, that though some reform was doubtless necessary in the management of the company's affairs, yet that the extent of the remedy went infinitely beyond the extent of the necessity: That the disfranchisement of the members of the company, and the confiscation of their property, could only be justified by acts of delinquency legally established. To this it was replied, that their property was not confiscated, the bill expressly vesting it in the company, in trust for the sole benefit of the proprietors. But to whom, said the opponents, are they to apply for relief, in case of the gross abuse of this trust? It can only be to parliament, where in any dispute, the corrupt influence, created by the bills, would readily procure to any minister, a majority in his favour. With respect to disfranchisement, it was urged, in support of the bills, that the most material of their franchises, their commercial monopoly, was left untouched; and that those taken away were such as had been grossly and notoriously abused. The advocates for the new system, in establishing the plea of necessity, acknowledged themselves bound to prove, 1st, That the abuses alleged were of enormous magnitude and extent, and highly dangerous in their consequences; and 2dly, That they were habitual, and, without an entire change of system, utterly incurable. The state of the company's finances was the first instance adduced, and their applications to parliament for leave to borrow 800,000 in bonds and exchequer bills, (see § 117.) and for the remission of near a million, owing for duties, were stated as proofs. The bills drawn for near two millions, (above mentioned by Mr Fox, § 117.) were urged as an additional evidence, and the danger of the consequences, if these bills were allowed to be protested; was expatiated upon; as well as the equal danger on the other hand, of pledging the public faith for their payment, without a previous examination into the state of their affairs. With a balance of near 8 millions against them, it was asked, whether, without adopting some effectual reform, the house could lend the public money, on the security of a company already on the verge of bankruptcy. In opposition to this, it was averred, that the account stated by Mr Fox, (§ 117.) was absolutely false; and another account was presented to the house by the directors, in which there appeared a balance in favour of the company of near 4 millions. This difference of 12 millions between the two accounts, arose from their having been drawn out on different principles. In the statement of the directors, every species of the company's property was brought into account, and a balance struck on the supposition of its being at that moment dissolved. In that of Mr Fox, such parts only of their stock were carried to their credit, as could be disposed of, leaving them still in a condition to continue their trade, which it was the object of these bills to enable them to do. On this principle, the following sums, carried to the credit of the company, in the statement of the directors, were disallowed:

Shipping, warehouses, and stores, L. 2,450,000
 Disputed debts claimed from
 France, Spain, and Britain, 421,000
 Debts claimed from Indian princes, and rentees, 3,402,000
 To be deducted from 4,200,000 L.
 lent to government, at 3 per cent. 1,675,000

Sums added to the DEBTS of the COMPANY.
 Loss on 4 cargoes from Bengal, L. 113,430
 Balance on freight for shipping, 1,675,500
 Arrears due to the military, 140,000
 Due to the Soubah of the Decan, 300,000
 Capital Stock due to the proprietors, 3,200,000

Allowed on 2,992,440 l. India ann.
 3 per cent, 1,246,500

Difference of Accounts, L. 12,045,000
 The above sum of 4,200,000 l. was to be repaid to the company, if government should put an end to their monopoly; but in the mean time, it was argued, their interest in it, if allowed at all, could not be valued at more than the price of that interest in the 3 per cents. In like manner, 1,346,600 l. is allowed above to the credit of the company, being the difference between 2,992,440 l. due to the proprietors of Indian annuities, at 3 per cent, and the current price of that stock, which was 55 per cent.—The principles of this statement were strongly controverted by the speakers in opposition, and, even supposing them just, the last article in which the company's original stock was stated as a debt against them, was said to be a direct opposition to the principle first laid down. The 2d head of abuses related to the company's government in India, as it affected 1st, The independent powers of that country: 2d, The state in alliance with, or dependent on us; and 3. Our own territorial possessions. Under the 1st class were ranged the extravagant projects, and expensive wars, entered into by the company, for the purpose of extending their dominions; their violations of treaties; their breaches of faith; the abuse of the company's authority and assistance, in support of the ambition, rapacity, and cruelty of others; and the betraying, each in his turn, of every prince, without exception, with whom they had formed any connection in India. The 2d class brought in proof of these, and of the subsequent general charges, were taken from the reports of the two Indian committees, and were partly enumerated by Mr Fox in his speech introductory to the bills. (§ 117.) The 2d class of abuses comprehended their corrupt and ruinous interference in the internal government of the princes dependent on them; the invasion of their rights; the unjust exaction of exorbitant aids and tribute; the flagrant and enormous peculations of the company's civil servants, and the disorders and rapacity of the military. 3. With respect to the management of countries under their own immediate dominion, it was stated, that the general system of their conduct was directed to one single end, namely, the trade.

n of wealth from that country to this. With few, at one time monopolies had been established, not only of every article of trade, but of the necessities of life; at another, the principle of pre-emption was secured to the company; and these were followed by partial and arbitrary preferences, not less ruinous in their consequences than the former. By this impolitic oppressive conduct, the merchants and bankers of India, many of whom, in extent of trade and wealth, were scarcely equalled by those of the East in Europe, being disabled from all undertakings of magnitude, fell gradually into decay, while the native cultivators and manufacturers were obliged to accept of a bare sufficiency for their subsistence, measured out to them by those who sought to profit by their labour. But this was not enough, for in the progress of these destructive measures, the oppressions and cruelties, committed by those to whom the execution of them was entrusted, went far beyond the original evil. The company's servants, adopting the principles of the despotic employers, extended the practice to their private advantage; and, to complete the mischief, they were under the necessity of supporting the injuries done to the natives for their own ends, by new injuries committed in favour of those, to whom they were to account. The oppressions of the zemindars, and the renters under them, if possible, still more deplorable. At the time we obtained the Dewannee from the Mogul, the provinces of Bengal and Bahar had been laid waste by a famine, that had carried off one third of the inhabitants. (See *BENGAL*, § 3.) The thing done for their relief was, to exact from the remaining two thirds the same tribute that had before been paid by the whole country daily declining, and the distress occasioned by this rapacity threatening the loss of the object for which it had been adopted, the company's government in India had proceeded to the most arbitrary, the most unjust, and the most cruel acts of power recorded in history. They had set up to public auction the whole land-revenue of Bengal, without the least regard to the rights of private property, or even a preference to the ancient possessors. The zemindars, and the persons of ancient families and respectable fortunes, were under the necessity either of bidding against every temporary adventurer, and defeating the schemer, or of seeing their whole estates transferred up to the management of strangers. The most skilful and most knavish jobbers entered into their terrestrial lands; and the banyan, or black slave, of the governor general, in particular, was enabled, after this auction, to be in possession of a revenue amounting to the enormous value of above 400,000 l. a year. The sufferings of the natives under our dominion, in India, were greatly aggravated, by their being almost wholly excluded from any share in the expenditures of the company's government. All the principal collections of revenue; all the honourable, all the lucrative situations in the army; all the supplies and contracts of every kind, were solely in the hands of the English: so that the natives, with very few exceptions, were only employed as the servants and agents of Europeans, in subordinate stations in

the army, and in the inferior department of collection, where it was impossible to proceed a step without their assistance. The sum of 420,000 l. had, indeed, been agreed to be paid to the nabob of Bengal, for the support of his government, (as an express condition of the grant of the territorial revenues, which amounted to upwards of three millions,) and out of this sum, distributed through the various departments of civil administration, many natives of the higher ranks, though scantily provided for, were at least preserved from indigence and ruin. But within a few years after the Dewannee came into our possession, this pension had been reduced to 160,000 l. without the least regard to the subsistence of these innocent people, or to the faith of the treaty, by which they were brought under the British government. On the whole of the article *abuses*, it was averred, that, by these accumulated acts of injustice, oppression and cruelty, dictated by an improvident and rapacious policy, our possessions in India, instead of a resource to the public, were in danger of becoming one of its greatest burdens; that, by the oppression of our allies and dependents, they had either alienated them from us, or rendered them useless and burdensome to us; that by wars carried on from corrupt and ambitious motives, and by repeated violations of the most solemn engagements with foreign powers, they had destroyed all confidence in British faith and justice, and rendered our government odious and detestable throughout India.—Neither the facts from which these conclusions were drawn, nor the conclusions themselves, both of which indeed stood already recorded in the proceedings of the house, were controverted by the members in opposition, otherwise than by a general assertion of their being somewhat exaggerated. But the plea of necessity, which the framers of the new bill had undertaken to establish, (viz. that these abuses, without a total change of system, were utterly incurable) was more strongly contested. In the course of the debate it was often urged, that a company of *merchants* was totally unfit to be trusted with the political government of a distant foreign dominion, or with the management of large territorial revenues. But as this position was not generally assented to, in its full extent, by either side of the house, the arguments chiefly insisted on were drawn from the peculiar constitution and circumstances of the company itself. The parties concerned in the direction of the company's affairs were three, the proprietors, the directors, and the ministers of the crown. The first of these bodies consisted of persons of two descriptions:—of the fair natural stock-holder, who had vested his money in their fund, for the sake of the annual interest he drew from it; and of the political stock-holder, whose object was a participation of the power and patronage of their vast empire. That no reformation could be expected from the latter description of proprietors, was evident, since they had a common interest with the powerful delinquents in India. To them, these last looked for immunity and support, and, in return, repaid them in the persons of their friends and dependents, by a share in the boundless plunder of the East. As far therefore as these proprie-

tors were concerned, (and they made a very considerable, and by far the most active part of the body,) the proprietors had become an aggregate of private interests subsisting at the expence of the collective body. The other class of stock-holders had, indeed, an interest in the general welfare of the company; but as it might happen, and in fact had happened, that measures ruinous to their permanent interests were attended with great temporary lucrative advantages, they overlooked, in the increase of their dividend, and the improvement of their capital, all the injustice, violence, and rapacity, from which such promising appearances derived their support. The court of directors, being a representative body, naturally partook of the imperfections and disorders of its constituents. The influence of delinquent servants in India equally domineered there, and from the same causes. The interest that a director possessed, from his qualification in the company's profits, did not exceed 160*l.* a-year; but the support he was thereby enabled to lend to an obnoxious servant abroad, might be turned to a much better account. It was stated, that the son of a person, who had been for some time the chairman of that court, before he was in Bengal two months, sold the grant of a single contract for 40,000*l.* It was alleged on the other side, in behalf of the court of directors, that their general letters, and the instructions sent to their servants abroad, were not only for the most part consonant to policy and humanity, but "contained as fine a system of ethics as could have been penned by the wisest moralist." It was urged, in reply, that this rendered the case more desperate; as it was a notorious fact, that their orders were universally contemned and disobeyed, and that the objects of their uniform censure had been constantly supported, while disgrace and ruin had been the inevitable lot of those whose conduct had received their uniform applause. As a check upon this corrupt collusion between the servants of the company and their masters, a power of inspection into the conduct of both had been given by act of parliament, to the ministry. Great stress was laid upon this regulation, by the opponents of the bills, who urged, that by amending a few errors, and supplying a few defects, a control might be established over the company, sufficient to secure its good government, without the violent demolition of its rights aimed at by the bills. In answer, it was argued, that every regulation, by which an effectual control over the company was lodged in the ministers of the crown, was necessarily a violent infringement of the *chartered rights* of the company; and until those regulations were proposed, it was impossible to say, whether they might not in fact, though perhaps in a more covert manner, prove equally subversive of their privileges, with the plan then under consideration: That the question then was, whether in the present alarming state of their affairs, it would be more wise to adopt a new system of government, simple and open in its constitution, and effective and responsible in its operations; or to trust to the blind collision of jarring and contradictory interests, in a contest between rich and powerful delinquents, avaricious proprietors, and intriguing ministers:

That experience had already decided it; for all the plans of reformation, which parliament during 12 years had attempted to engraft upon the present system of the company's government, and notoriously failed in their effect; and had, in many instances, even aggravated the evils they were meant to redress. The last argument urged by the opposers of the bills, was, that they created a new and unconstitutional power, a kind of 4th estate in the realm, and by the enormous influence they lodged in the hands of a faction for years, might in the end annihilate the power of the crown, and subvert the constitution. Mr. Secretary Fox, who brought in the bills, was answered with great asperity, of having abandoned former principles, and of being actuated in the measure he proposed, by motives of the most ordinate ambition. In answer to this, it was stated, that no new power whatsoever was created by the bills; and that if the Indian government was a 4th estate, it had existed as such ever since its first formation. It was not denied, that the new commissioners would derive a certain degree of influence from the power vested in them; but two things were inseparable; the only question was, whether that power and that influence were wisely and safely deposited? The expediency of adopting some fixed period, for the duration of their authority was manifest. Much was to be done in India: It was therefore necessary, that reasonable time should be allowed them for carrying into effect their plans of reformation, without being subject to the vicissitudes of ministerial revolutions: and it was a measure of great caution, at least, if not of wisdom, to confine it, if the bill proposed to do, within the smallest limit possible. The commissioners were, in the first instance, nominated by the house of commons, according to the constant practice of parliament, and commissions, down to that of the land tax: Every imaginable precaution was taken to secure the execution of the trust reposed in them. Every part of the bills inculcated the wisdom of a jealousy of power, and presumed the possibility of bad administration. They rendered all concealment absolutely impossible; they annexed responsibility, not only to every *action*, but even to the *inaction*, of the persons who were to execute them; and they provided the means of a strict scrutiny. Such were the chief arguments by which these *reformatory bills* were opposed and defended. The debate often lasted till near 5 in the morning. The chief speakers in support of them were the two Secretaries, Mr. Fox, and Lord North; Sir Grey Cooper, and Messrs. Erskine, Burke, Sheridan, Ansell, and Adam; against them, Messrs. W. and T. Pitt, the marquis of Graham, Sir J. Lowther, and Messrs. Dundas, Dempster, Powis, Jenkinson, and McDonald. On the 28th Nov. the votes on the commitment of the 1st bill were 229 to 120. On the 1st Dec. in the committee, the votes for proceeding on the bill stood 217, to 103; on the 5th the 7 directors and 9 assistants were nominated without opposition; and on the 8th, the bill was passed by a majority of 106; there being 54 for it, and 102 against it.

(119.) ENGLAND, HISTORY OF.—CHIEF STANCES LEADING TO THE REJECTION OF THE

's INDIA BILL, AND CONSEQUENT CHANGE MINISTRY. Hitherto no symptoms had appeared to indicate the approaching fate of the bill to its authors. Great pains, indeed, had been taken, and not without success, by the circulation of numberless pamphlets and political caricatures, to inflame the nation against both the measures and the persons of ministry. In the House of Commons, several of these members, known by the title of the king's friends, voted against the bill; but as, on the one hand ministry were too strong to be shaken by the breath of popular clamour, so, on the other, it seemed improbable, that they should have adopted the measure of such vast importance, either without consulting, or contrary to, the royal inclination. On the 9th Dec. Mr Fox carried the first bill to the House of Peers, and on the 11th it was read a second time, when E. Temple, lord Thurlow, and lord D. of Richmond, expressed their abhorrence of the measure in the strongest terms. Lord Thurlow descanted on the flourishing state of the king's affairs, and pronounced a brilliant panegyric on Gov. Hastings. After a short debate the production of papers, whereon no division could take place, the second reading was fixed for the 15th. In the mean time various rumours began to circulate respecting some extraordinary motions in the interior of the court. It was confidently asserted, that on the 11th Dec. the king had signified to lord Temple, his disapprobation of the E. bills, and authorised him, to declare the same to such persons as he should think proper: A written note was put into his hands, in which his majesty declared, that "he should expect those who should vote for it, not only *not* his friends, but his enemies; and that if he (lord Temple) could put this in stronger words, he had authority to do so." And lastly, that, in consequence of this authority, communication had been made to the same purport to several of the peers. Some extraordinary circumstances, which happened on the day of the second reading of the bill, in the upper house, confirmed the probability of these reports. Several lords, who had sent their proxies to the minister and his friends, withdrew then only a few hours before the vote was met; and others, whose support he had reason to expect, voted against the bill. The bill being heard against the bill, and soliciting adjournment at night to postpone farther proceedings till the next day, the E. of Coventry moved to adjourn; but was opposed by ministry. At half past one, however, the house divided; when it carried for the adjournment 87; against it, 79; majority 8. On the next occasion the prince of Wales voted with the ministry. On the same day, the house of commons, on Mr Baker's motion, took into consideration the above reports. He stated, that the ministry both of the fact and its effects, called for immediate interference. He divided the reality of the subject of the reports, into two questions; 1st, the giving secret advice to the crown; and 2d, the use that had been made of the king's authority, to influence the votes of members of parliament, in a matter depending before them. 1st, he insisted, was a direct and dangerous

attack upon the constitution. The law declared, that the king can do no wrong, and therefore had wisely made his ministers amenable for all the measures of his government. This was the very essence of the constitution, which could no longer subsist, if persons unknown, and on whom no responsibility could attach, were allowed to give secret advice to the crown. With regard to the 2d, Mr Baker proved, from the journals, that to make any reference to the opinion of the king, on a bill depending in either house, had always been judged a high breach of the privileges of parliament. He therefore moved, "That it is now necessary to declare, that to report any opinion, or pretended opinion of his majesty, upon any bill, or other proceeding depending in either house of parliament, with a view to influence the votes of the members, is a high crime and misdemeanour; derogatory to the honour of the crown; a breach of the fundamental privileges of parliament, and subversive of the constitution. The motion was seconded by lord Maitland, but strongly opposed by Mr W. Pitt, who urged the impropriety of proceeding on mere unauthenticated rumours; alleging that if such rumours were judged a proper foundation for the house to proceed upon, rumours had been circulated with equal industry, that the same use had been made of the king's name in favour of the bill. With respect to the effects adduced as a proof of these reports, they were not conclusive, as it was not unusual for the lords to reject a bill that had been passed by the commons, without the least suspicion of undue influence. With respect to the alleged criminality of the facts, he denied that it was criminal in any of the peers, who were the acknowledged hereditary counsellors of the crown, to give advice to the king, in any case whatever; and as to the breach of the privileges of parliament, he contended, that the precedents read from the journals, though selected from the glorious times of K. Charles I., were in nowise applicable to the present case. In answer to these remarks, it was said to be a strong presumption of the truth of these reports, that though several members, nearly related to the earl alluded to, had spoken in the debate, none of them had asserted, that they were false; and that the facts produced were really the effects of undue influence, and not of conviction, was manifest from certain well known circumstances, relative to a late division in another place. After a long and warm debate, the house divided, when there appeared for the motion 151, against it 80. It was then resolved, "that on Monday next, the house should resolve itself into a committee of the whole house, to take into consideration the present state of the nation." As a change of ministers appeared to be a measure determined upon by the king, and a dissolution of parliament, the immediate and necessary consequence, the majority of the house thought no time was to be lost, in endeavouring to render the attempt as difficult as possible. With this view, immediately after the above resolutions were agreed to, Mr Erskine made the following motion, "That it is necessary to the most essential interests of this kingdom, and peculiarly incumbent on this house,

to pursue with unremitting attention the consideration of a suitable remedy for the abuses, which have prevailed in the government of the British dominions in the E. Indies; and that this house will consider, as an enemy to his country, any person who shall presume to advise his majesty to prevent, or in any manner interrupt, the discharge of this important duty." The motion was opposed as factious, as interfering with the executive part of government, and trenching on the undoubted prerogative of the crown, without any just cause. It was carried, however, by the same majority, with the former. On the 16th Dec. the house of peers heard counsel against the bill, and on the 17th, after a warm debate, it was rejected by a majority of 95 to 76. On this occasion the prince of Wales did not vote. Previous to the division, the reports of the undue influence being again mentioned by the D. of Portland, lord Temple acknowledged, that his duty had led him to solicit an interview with his sovereign on the bill; that he had then communicated his sentiments very fully to his majesty; that these were lodged in the breast of his sovereign; but what they were would for ever remain a secret. But though he would not declare affirmatively, what his advice to his sovereign was, he would tell their lordships negatively what it was *not*: It was not friendly to the principle and object of the bill. In doing this he was confident he had acted a dutiful part to his sovereign. On the 18th, at 12 o'clock at night, a messenger delivered to the two secretaries his majesty's orders, "That they should deliver up the seals of their offices, and send them by the under secretaries, Messrs Frazer and Nepean, as a personal interview would be disagreeable to him." The seals were immediately given by the king to lord Temple, who sent letters of dismissal next day to the rest of the cabinet council; and W. Pitt, Esq; was appointed first lord of the Treasury, and chancellor of the Exchequer; and E. Gower president of council. On the 22d lord Temple resigned the seals, which were delivered to lord Sydney and the marquis of Caermarthen, as secretaries of state. Lord Thurlow was appointed lord high chancellor, the D. of Rutland lord privy seal, lord Viscount Howe first lord of the Admiralty, the D. of Richmond, master of ordnance, W. W. Grenville, Esq; and lord Mulgrave paymasters general, H. Dundas, Esq; treasurer of the navy; E. of Salisbury lord chamberlain, Lloyd Kenyon, Esq; attorney general, R. Pepper Arden, Esq; solicitor general, H. Campbell, Esq; lord advocate for Scotland, and R. Dundas, Esq; solicitor.

(120.) ENGLAND, HISTORY OF.—MEASURES ADOPTED BY THE HOUSE OF COMMONS TO PREVENT A DISSOLUTION OF PARLIAMENT. The formidable majority in the house of commons, that still adhered to the late ministry, after their dismissal, made the dissolution of parliament, in the public opinion, an event immediately to be expected. The passing of the land tax bill, however, was a step previously necessary. It had been twice read, and the 20th of Dec. appointed for the 3d reading. But as the committee on the state of the nation was to sit on the 22d, the house, on the 19th, after a short debate, adjourned to

the 22d. On that day, before the speaker took the chair, Mr W. Grenville informed the house that lord Temple had authorized him to say, that he was ready to meet any charge that should be made against him; and that he had thought it proper to resign the seals to prevent all suspicion of his being for protection under the influence of a minister. In answer to this singular notification, Mr Fox said, that, as to the earl's relinquishing office, which he had held but 3 days, he was doubtless the fittest judge; but as to the facts included, facts of public notoriety, which affected the honour of parliament, and the safety of the constitution, he trusted the house would take them into their most serious consideration; that indeed, the secret nature of them almost precluded the possibility of bringing a personal charge against any one.—In the committee on the state of the nation, Mr Erskine proposed that an address should be presented to the king, stating "the alarming reports of an intended dissolution of parliament: to represent to his majesty the inconveniences and dangers that would attend such measure, at a moment when the maintenance of public credit, the support of the revenue, and more especially the distressed state of the funds of the E. India company, and the disorders prevailing in their government both at home and abroad, demanded the most immediate attention to beseech his majesty to suffer them to proceed on the important business recommended to them in his speech from the throne; and to hear the voice of his faithful commons, and not to give secret advices of persons, who may have private interests of their own, separate from the interest of his majesty and his people." The same prerogative language used by the friends of the new ministry, in the debate of the 19th, and the eagerness in pressing the 3d reading of the bills, left no room to doubt of their intention to dissolve the parliament, as soon as that necessary step was secured. But on this day there appeared symptoms of a desertion of the design, and change in the councils of government was proposed to have been the real cause of lord Temple's sudden resignation. In the former debate was strongly urged, that it was time to check a violent disposition, that had lately appeared to encroach on the prerogatives of the crown, and which threatened to overturn the balance of the constitution; that the present moment was to justify the exertion of these prerogatives; that he was not fit to be a minister, who should be deterred by any resolutions of that house, from pursuing what he might judge to be the duty of his duty. The present question was combined on quite different grounds. Mr H. Dundas, Mr Bankes, a confidential friend of Mr Pitt, assured the committee, that there was no intention in government to interrupt the proceedings of parliament, either by dissolution or prorogation. The latter expressly added, that he had authorized Mr Pitt to declare, that if such a motion should be proposed in his majesty's council, he would oppose it, and if it should be carried against his opinion, he would immediately resign his office. The majority were not, however, satisfied by these assurances. It was asked, what

security could be derived from the promises of a minister, whose accession to power was founded on an attempt to degrade the dignity of that house? But, allowing him all the credit that might be required, what dependance could be placed on the influence of a person in a future cabinet, who had as yet but one colleague in office?—(for the rest of the new ministry, [§ 119.] were not appointed till the 23d and 27th) and even though they had the same assurances from the whole cabinet, did not the experience of last week prove, that their decisions might the next moment be over ruled by the secret and irresponsible advisers of the crown? No reply being made to these arguments, it was resolved without a division, at the address, as proposed, should be presented to the king by the whole house. On Wednesday the 24th Dec. the speaker read to the house his answer, which had that day been given to their address by his majesty on the throne. It was in these words: "Gentlemen, It has been my constant object to employ the authority entrusted to me by the constitution, to its true and only end—the good of my people; and I am always happy in concurring with the wishes and opinions of my faithful commons. I agree with you in thinking, that the support of the public credit and revenue must demand your most earnest and vigilant care. The state of the East Indies is so an object of as much delicacy and importance, can exercise the wisdom and justice of parliament. I trust you will proceed in these considerations with all convenient speed, after such an adjournment as the present circumstances may seem require. And I assure you, I shall not interrupt your meeting by any exercise of my prerogative, either of prorogation, or dissolution."—Some objections were made to the concluding words of this answer. It was said, that the whole tenor of the royal favour amounted to no more than an assurance, that they should meet again; at the terrors of a dissolution were still left before their eyes, with a strong implication, that a fatal sentence should, or should not, be pronounced, as their behaviour might merit. It was said, that this artful design would fail in its effect; and that without regarding the consequences, they would continue their exertions to save the constitution from the dangerous example, of establishing a ministry formed in defiance of the house of commons, on the ground of private honour, opposed to public confidence, and not on the voice of the country, or the sense of parliament.—In the committee upon the state of the nation, on a motion of lord Beauchamp, the chairman was directed to move, "That it is the opinion of this house, that the lords of the treasury ought not to consent, that the directors of the East India company do accept any more bills, unless they shall be able to prove to parliament, that they have sufficient means to provide for the payment of them, after they shall have paid their dividend, and discharged the debt due to government."—It was next resolved, on a motion of the lord of Surrey, that an address be presented to the king, to desire that his majesty would not grant the office of chancellor of the duchy of Lancaster to any person, otherwise than during pleasure,

before the 10th of Jan. 1784. These motions met with but a feeble opposition. It was urged against the former, that it was setting up a resolution of that house against a positive act of parliament; by which act a discretionary power was lodged in the commissioners of the treasury, of giving their consent to the acceptance of bills to any amount, by the E. India company, upon application from the court of directors. It was said, in reply, that the house was in the constant practice of declaring its previous sense of the use of any discretionary power, by resolutions similar to the present; and that such a declaration was now absolutely necessary, as the ministers were, or pretended to be, of opinion, contrary to the conviction of that house, that the company's affairs were in a state sufficiently flourishing to authorize them to consent to such an acceptance. The latter motion was founded on the inquiry that had been instituted, into the establishments of the duchy of Lancaster, for the purpose of determining, whether these might not be reduced or abolished. These motions being passed, the house adjourned to the 14th of January, 1784. The expectation of the public was now fixed with great anxiety on the meeting of parliament after the recess. A contest between the executive government and the house of commons was a spectacle, that had not been exhibited in Great Britain since the accession of the house of Hanover: and many circumstances concurred to render this contest peculiarly important and interesting. The matter in dispute concerned the very essence of the constitution, and could not be decided without considerably affecting its bias. In defence of the authority of the house of commons were arranged the united abilities of two powerful parties, long exercised by mutual contests in all the arts of political warfare. The champion of prerogative was a person not less distinguished by his splendid talents, and the unexampled rapidity of his rise to power, than by the courage and perseverance he had already demonstrated in the cause he now stood forward to support. By the usual effect of ministerial influence upon the house of commons, a sufficient number of members joined the new administration, to make their votes nearly equal to those of opposition. The inferiority in this and some other respects, under which the new minister laboured, was perhaps more than balanced by his being obliged to act on the defensive only; a situation of great advantage, when combined with the power to chuse his own moment of shifting the scene of battle, by an appeal to the people. It was reasonably to be expected, that they would arrange themselves on that side with which their own importance in the state was necessarily connected. The only hopes he could, therefore, entertain, of drawing them from their natural interest, arose from the probability of being able to excite a jealousy of the designs, and of the dangerous strength and power of his opponents. This had been done with extraordinary industry and success. Every advantage, therefore, gained by opposition in the house, proved in reality a *disadvantage* to them, as every point they carried, proved a fresh cause of suspicion to the people; and thus the minister

ter, by a judicious choice of his ground had always the advantage of making his adversaries appear in the wrong, in their attacks upon him. In this state of affairs, both houses met on the 12th Jan. 1784. As soon as the speaker had taken the chair, Mr Fox moved for the order of the day, but was interrupted by the new members, who were brought up to be sworn; and that business was no sooner over, than Mr Pitt rose at the same moment with Mr Fox, declaring he had a message to deliver from the king. A great clamour instantly arose in the house, who should be heard first; which was at last ended by the speaker's decision in favour of Mr Fox. The question, whether the house should resolve itself into a committee on the state of the nation, was then debated. The grounds, on which this was opposed by ministry, were the violent and unprecedented measures lately adopted by the committee, and the little probability that appeared from the present temper of the house, that their proceedings would in future be conducted with less passion. As parliament stood pledged, by the duty they owed their country, as well as by their own solemn declarations, to direct their attention without delay to the affairs of the E. India company, Mr Pitt implored the house to postpone, at least for a short time, the introduction of measures, that might retard or throw any difficulties in the way of this important consideration. He said, that he was then ready to bring forward his plan for the better regulation of the company's affairs; and he challenged a comparison between his bill, and the one lately rejected by the lords; adding, that he was ready to stand or fall by the merits or demerits of the measures he should propose. In answer to these arguments, it was denied, that either the resolutions already agreed to by the committee, or those which were intended to be proposed, were violent or unparliamentary. Unprecedented in the later journals of parliament, they undoubtedly were, and for good reasons, because, since the revolution, the dignity and essential rights of that house had never before suffered so open and direct an attack. It had been asserted by many great lawyers, and even by lord Somers himself, that the crown did not possess the prerogative of dissolving parliament during a session, *suble public business and petitions were pending*. But without contending about the question of right, it was strongly insisted on, that the exercise of such a power, in the present instance, would be highly dangerous and criminal; and that the committee was fully justified in taking such steps, as they might think the most effectual for the prevention of such a calamity. The circumstances of the case called for an open and unqualified declaration of their sentiments, and did not admit of that distant and respectful delicacy, which parliament usually adopted when it thought proper to interfere by its advice with the executive government. A bill, the result of the most laborious investigations that had ever been carried on in parliament, had passed the house of commons, with the warmest approbation of great and independent majorities. His majesty had been advised to conceal from his ministers his disapprobation of the bill, till it was

carried into the house of lords, where, by a constitutional use of the royal name and influence, it was rejected; the ministers who brought it were dismissed from the public service, for no other apparent reason, than because they had been supported in that measure, and were believed to possess the confidence of that house: and lastly, the menaces of dissolution were held over the house itself, to awe them into an acquiescence with the measures of the new administration. Under such circumstances it was impossible the house should not feel and express their indignation and resentment. The affairs of India were doubtless of the most urgent nature; but it was absolutely necessary in order to give the subject a free and unbiassed consideration, that the house should not be left dependent for its very existence, upon the will of the person, whose propositions relative thereto they were about to decide upon. The minister was, therefore, called upon, if he wished to put a stop to such farther measures as the committee might think necessary to adopt for their own security, to give the house some satisfactory assurance, that no dissolution would take place. With this requisition, Mr Pitt positively refused to comply, and declared, that "he would not compromise the royal prerogative, nor bring it away, in the house of commons." The majority, who were now persuaded, that the new ministers were only to be with-held by their fear from putting an end to the session, refused to render such a step highly dangerous, at least, if not impossible. With this view, as soon as the question for the order of the day was carried, on a division of 232 against 193, and the speaker had left the chair, the two following resolutions were moved by Mr Fox, passed without a division, and being reported, were agreed to by the house: I. "That it is the opinion of this committee, that for any person or persons in his majesty's treasury, or in the exchequer, or in the bank of England, employed in the payment of the public money, to pay, or direct, or cause to be paid, any sums of money, for or towards the support of the services voted in this present session of parliament, after the parliament shall have been prorogued or dissolved, if it be dissolved or prorogued before any act of parliament shall have passed appropriating the supplies to such services, will be a high crime and misdemeanour, a daring breach of the public trust, derogatory to the fundamental privileges of parliament; and subversive of the constitution of this country." II. "That it is the opinion of this committee, that the chairman of the committee be directed to move the house, that the bill for punishing mutiny and desertion, and for the better payment of the army and their quarters, be read a 2d time, on Monday the 23d of Feb. next"—The immediate dissolution of parliament being thus far rendered impracticable, the other two resolutions were moved by the E. of Surrey, viz. I. "That in the present situation of his majesty's dominions, it is pecuniary necessary that there should be an administration, which has the confidence of this house and the public."—II. "That the late changes in his majesty's council had been immediately preceded by dangerous and universal reports, that the sacred name of the king

had been unconstitutionally used to affect the deliberations of parliament; and that the appointments made were accompanied by circumstances of influence and extraordinary, and such as do not constitute or engage the confidence of this house." Mr Dundas objected to the 1st resolution, that the name of the king had been, perhaps *accidentally*, but certainly very improperly omitted; and proposed an amendment by inserting, instead of the words "this house and the public," the following, viz. "the crown, the parliament, and the people." This amendment, being merely proposed to point out the factious spirit of the resolution, was rejected without a division. The fact, chiefly relied on as the ground of the 2d resolution, was the rumour above related, (§ 119.) respecting the communication from the king to several peers through E. Temple. In answer to those who required farther proof of this transaction, it was observed, that the fact could only be known to 3 parties; to the peers to whom the communication was made; to the great personage from whom it came, and to the noble earl who conveyed it: that it was not to be supposed the first should come voluntarily forward to divulge what might be considered as a confidential conversation, with the certainty of incurring the displeasure of the court: if it were false, the ministers then in office would have received authority from the king to contradict a report so injurious to the honour of the crown. But, at all events, that the noble earl was bound, when he heard the house was proceeding on these reports, to come fairly within the bar, as other lords had done in former periods, and clear himself from so disgraceful an imputation. Gen. Ross related to the committee another fact, which, though denied by a relation of the party, yet appeared to have great weight with the members, viz. that, a few days before, the E. of Galloway had desired to see him at his house, where he told him, that if he voted against the new administration that day, he would be considered as *an enemy to the king*. A warm debate took place on this motion, in which the most violent and sarcastic personalities were thrown out and retorted from both sides of the house. The coalition was branded as a corrupt confederacy of two desperate factions, to seize upon the government; the India bill was said to have been an experiment made by the late secretary, to raise himself to a degree of power superior to that of the sovereign. On the other hand, the new administration were described as a coalition, not indeed of parties, but of the shreds and remnants, the dregs and outcasts of all parties; as a body collected for the purpose of fighting the battles of secret and unconstitutional influence; of trampling on the power and dignity of the house of commons; of establishing a government of cabal, intrigue, and favoritism; and of destroying the very principles of laudable ambition and honourable service in the state. At last, about 7 o'clock on the morning of the 13th Jan. the committee divided, when the motion was carried by a majority of 142, there being for it 196, against it, 54.

(121.) ENGLAND, HISTORY OF.—MR PITT'S EAST INDIA BILL. On Wed. the 14th Jan. Mr

Pitt moved for leave to bring in "a bill for the better government and management of the affairs of the East India company." By this bill commissioners were to be appointed by his majesty, from the members of his privy council, who were "authorized and empowered from time to time, to check, superintend, and controul, all acts, operations, and concerns, which in any wise relate to the civil or military government, or revenues of the territories and possessions of the said united company in the East Indies." It proposed to enact, "that the said board shall have access to all papers and muniments of the said united company, and shall be furnished with copies thereof, and of all the proceedings of all general and special courts of proprietors, and of the court of directors; and also copies of all dispatches which the directors shall receive from any of their servants in the East Indies, immediately after the arrival thereof; and also copies of all letters, orders, and instructions whatsoever, relating to the civil or military government or revenues of the British territorial possessions of the E. Indies, proposed to be sent to any of the servants of his majesty, or of the said company in the E. Indies: and that the court of directors shall, and are required to, pay due obedience to, and shall be governed and bound by, such orders and directions as they shall from time to time receive from the said board, touching the civil or military government and revenue of the territories and possessions of the company." And it further proposed to enact, "that the said board shall return the copies of the said dispatches to the court of directors, with their approbation thereof, or their reasons at large for disapproving the same, together with instructions in respect thereto; and the court shall thereupon dispatch and send the letters, orders, and instructions, so approved or amended, to their servants in India, without farther delay; and that no letters, orders, or instructions, until after such previous communication thereof to the said board, shall, at any time, be sent or dispatched by the said directors, to the E. Indies, on any account or pretence whatever. That in case the said board shall send any orders, which in the opinion of the said court of directors, shall relate to points not connected with the civil or military government and revenues of the said territories and possessions in India, it shall be lawful for them to apply by petition to his majesty, in council, requiring such orders; and the decision of the council thereon shall be final and conclusive. That the nomination of the commanders in chief shall be vested in his majesty, and that the said commanders in chief shall always be second in council." It also vested in his majesty, "the power to remove any governor general, presidents and members of the councils of any British settlements in India;" and proposed to enact, "that all vacancies in the offices aforesaid shall be supplied by the court of directors, subject to the approbation of his majesty; and in case the person nominated by the said court shall not be approved by his majesty, the said court shall proceed to nominate some other person, subject to the approbation or disallowance of his majesty, in the same manner as before directed, and

to *toties quæties*, until some person or persons shall be nominated and appointed, who shall be approved by his majesty; and in case the court of directors shall not within days, proceed to supply the same, then it shall be lawful for his majesty, to appoint a person to supply the office so vacant. Lastly, that no order or resolution of any general court of proprietors shall be available to revoke or rescind, or in any respect to affect, any proceeding of the court of directors, after his majesty's pleasure shall have been signified upon the same."—The debates on this bill turned chiefly on its merits and demerits, as compared with Mr Fox's India bill, rejected by the house of lords. Mr Pitt said, that in his bill, all the rights enjoyed by the company under their charter were preserved inviolate, as far as was compatible with the public safety. When, in answer to this, it was shown, that nothing but the shadow of power was preserved to the company, and that, by the negative reserved to the crown in all matters whatsoever, the substance was in effect vested there; he replied, that wha'ever might be its effect, yet having previously obtained the consent both of the court of proprietors and directors, to all the regulations contained in it, no violation of privileges could be charged, where the surrender was voluntary. Against this argument it was rejoined, that the consent of 250 proprietors (the number of those who voted for the regulations in the bill,) could not imply the consent of the whole body of 1400; especially in a case of property, where no delegation of the power of balloting could be communicated, and where a great part of the absent members had not an opportunity to attend. The 2d point, wherein the new bill differed from the first one, was this, that it left where it found all the patronage of the company, except the appointment of the commander in chief. But this, it was objected, was a mere fallacious pretence; for the whole military patronage would necessarily follow the appointment of the commander in chief. The negative given to the crown, in appointing the governors and council, would enable the minister in reality, though not in form, to nominate the whole; and every member, both civil and military, being made removable at the will of the crown, would naturally become subservient to its views. The former bill had occasioned great alarm, as creating a new power dangerous to the constitution. The object of the new bill was merely control, the exercise of which was referred to the discretion of the crown. But to this it was answered, 1st. That to leave one set of men, (who had not only been convicted of having notoriously abused their power, but were universally allowed to be unfit for the trust reposed in them,) in possession of dominion merely to be controlled by another, was to establish disunion and weakness in government upon system. The notable expedient of an appeal from the king's privy council, to the king in council was ridiculed by opposition. Second, That the proposed regulations tended to confound one of the strongest principles of good government, viz. responsibility. The directors stood foremost in the ostensible government of the company, but they would be made responsible for orders and in-

structions, which they might be obliged to sign, contrary to their judgments and conscience. Lastly, it was strenuously contended, as had been done in the debate on the rejected bill, that no effectual system of regulation could be devised, in which an independent and permanent power was not lodged in the persons who were to be intrusted with the execution of it. The bill was read a 2d time on the 23d Jan. but the motion for its commitment was rejected by a majority of 8; the votes being for it, 214, against it, 228.

(122.) ENGLAND, HISTORY OF.—FARTHER PROCEEDINGS OF PARLIAMENT, TO ITS DISSOLUTION, IN 1784. On the 16th Jan. Lord Charles Spencer moved, in the committee on the *state of the nation*, "That it having been declared to be the opinion of this house, that "in the present situation, &c." [Here the two resolutions moved by lord Surrey (see § 120.) were quoted:] "the continuance of the present ministers in trust of the highest importance and responsibility, is contrary to constitutional principles, and injurious to the interests of his majesty and the people." In opposition to this motion it was argued, that the premises, admitting them to be true, did not warrant the conclusion; that the ministry had been constitutionally appointed by the king, whose will it was to appoint them, &c. After a warm debate, the resolution was adopted, by a majority of 205 to 184. On the rejection of the India bill, Mr Pitt was called upon to satisfy the house respecting the measure of a dissolution; and as he remained silent, a loud and general call was repeated from every side of the house. At length some harsh personalities obliged him to rise and complain of such treatment, but he concluded with a flat refusal to give any answer on the subject. The house became unusually warm, and Mr Eden was preparing a resolution, when Mr Fox moved to adjourn till next day in order to give Mr Pitt time to consider, whether he had treated the house with that respect which a minister in his peculiar circumstances ought to do. Next day, Sat. Jan. 24, the house met again, but the only answer given by the minister was, that "he had no intention to advise his majesty to prevent that house from meeting on Monday;" whereupon the house, upon Mr Powis's motion, adjourned to that day, "in the hopes, that, before next meeting, some means might be invented of healing the divisions, that threatened the country with anarchy and confusion." These hopes, however, were disappointed, notwithstanding a respectable meeting was held on the 16th at the St Alban's tavern, of about 70 members, who joined in an address to Mr Pitt and the Duke of Portland, recommending such a measure by a union of parties; "being persuaded (they said) that the united efforts of those, in whose integrity, abilities, and constitutional principles, they had reason to confide, could alone rescue the country from its present distracted state." To promote such an union of parties, a motion was made by Mr Grosvenor, on the 2d Feb. in the house of commons, and unanimously agreed in "That the present critical situation of public affairs required the exertions of a firm, efficient, extended, and united administration, entitled to the confidence"

ence of the people, and such as might tend to an end to the divisions and distractions of the country." A 2d resolution, of a less mild nature, was moved by Mr Coke, "That the conduct of the present ministers in office, was an obstacle to the forming a firm, efficient, extended administration." This motion occasioned a warm debate, but was at last carried by a majority of 211 to 187, to be laid before his majesty. On the 4th Feb. the E. of Effingham, drew the attention of the house of lords to the resolutions passed by the commons, which he considered as of the utmost importance to the constitution and therefore moved as follows: I. "That the unconstitutional for one branch of the legislature to assume a right of resolving to impede the exercise of a power vested in any body of men by parliament." And, II. "That it is unconstitutional for either house of parliament to pass a resolution to deprive the crown of its just prerogative." The first of these motions occasioned a very warm debate. It was supported by Mr William, E. Fauconberg, D. of Richmond, Mr L. Sydney, and L. Gower, and opposed by L. Loughborough, E. of Mansfield, and Mr. Erskine, who vindicated the resolutions of the commons. Upon a division there appeared 111 for it, against it 53; majority 47. Lord North's 2d resolution, and motion for an address to his majesty on the subject, were then adopted without a division. Next day, lord Beauchamp rose in the house of commons, and mentioned a rumour, that another house of parliament was so far as to censure the proceedings of the commons: whereupon he moved for a committee to inspect the journals of the house of lords; which was agreed to, the report of the committee was presented forward on the 9th, and a committee appointed to search for precedents. In the mean time the members of the St Alban's meeting, to promote the wished for coalition, came to the following resolution, which was read in the house of commons on the 11th Feb. by Mr Marshall: "That an administration, formed on the total exclusion of the members of either the last or present administration, would be inadequate to the exigencies of the public affairs."—This occasioned a leading men on both sides to express their dissent for an union of parties, though such dissensions were thrown in the way by each, as effectually prevented it. Mr Fox insisted on the accuracy at least virtual resignation of Mr Pitt, as an indispensable preliminary step; and avowed his opinion, that the house had, and ought to have a voice in the nomination of a minister. Mr Pitt replied, that no minister could continue long in office without the confidence of the house, but that there were any constitutional means to induce him to resign, except by an address to the crown; and added that there were persons to whom he could not bring himself to act without forfeiting all character of consistency. He called up lord North, who said, that though as not disposed to gratify the caprice of an individual, yet he would willingly do any thing in the country, and withdraw his pretensions, if

they were any obstacle to an union. This candid declaration of lord North, and a similar one from Mr Fox, procured them the applauses of both parties; and a measure was soon after suggested and acceded to which promised a speedy union. This was that his majesty should invite the D. of Portland to a conference with Mr Pitt, for the purpose of forming a new administration, on a wide basis and on fair and equal terms. But after this message had been actually sent, the negotiation was broke off upon the duke's insisting on a previous explanation of the word *equal*, which Mr Pitt refused to give till they should meet in conference.—On the 16th the report from the committee of privileges being called for, lord Beauchamp stated, that the lords could not constitutionally interfere with the resolutions of that house: that by custom and usage, whenever they disapproved of a resolution, and *vice versa*, a conference of both houses was called; whereby the house complained of, could satisfy the house complaining; and this was necessary to preserve mutual confidence between the two houses. After quoting the journals, and censuring the resolution of the lords as rash, he moved 6 resolutions: viz. 1. "That this house has not assumed any right to suspend the execution of any law. 2. That it is unconstitutional for it to declare its sense of the exercise of any discretionary power vested in any body of men by act of parliament. 3. That it is its duty, as intrusted with the sole grant of money, to prevent the rash exercise of any power, that may be attended with danger to the public credit. 4. That the resolutions of the 24th Dec. last (§ 120.) were constitutional, founded on a sense of duty towards the people, and a becoming anxiety for the preservation of the revenue, and the support of public credit. 5. That if the house had neglected to pass the said resolutions, they would have been highly responsible for the increase of those evils already too severely felt. And 6. That the house will with moderation, but with decided firmness, maintain inviolably the principles of the constitution; equally solicitous to preserve their own privileges, and to avoid any encroachments on those of the other two branches of the legislature." These resolutions, after a warm debate, were carried by 186 against 157.—On the 18th Feb. Mr Pitt being asked, previous to the consideration of the supply for the ordnance, if he had any thing to communicate relative to the resolutions, informed the house, "That his majesty, after a consideration of all the circumstances of the country, had not thought proper to dismiss his ministers, and that his ministers had not resigned." This brought on a long and violent debate. Mr Fox said it was the first instance, since the revolution, of a direct denial on the part of the crown to comply with the wishes of the house of commons: that it was the first time the house had not received a gracious answer from a prince of the house of Brunswick: that an event so new and alarming required on their part a firm but moderate, a prudent but effectual, assertion of their privileges; that the power of granting or refusing the supplies, was their constitutional and legal weapon, which he did not wish to see wielded: that to this, if necessary, they were bound to re-

Fort : but to avoid all imputation of rashness and give ministers time for recollection, he would only move to defer the report of the estimates till Friday next.—The motion was seconded by lord Surrey : but the mention of *refusing the supplies* was received by the friends of ministry, as a threat which even the utmost madness of faction, they said, could not seriously design to execute. The very *right* of such a refusal was questioned. The exercise of this privilege in former times (it was said) was founded on principles, which did not now exist. The settled revenues were then sufficient for the ordinary purposes of government ; and it was only in cases of extraordinary demands, for the prosecution of wars disapproved by parliament, that the right of refusal was exercised ; whereas in our present state, to deny the ordinary annual supplies would be in fact to dissolve the whole fabric of government. Mr Pitt did not deny the right of the house to refuse the supplies in times of danger from the crown, but the answer he had delivered from his majesty was not a formal answer as to an address ; and he appealed to the justice of the house whether it afforded a justifiable ground for exercising that right. Mr Fox's motion carried, however, by a majority of 12 ; ayes 208, noes 196. Though the supplies were thus postponed, it was by no means the intention of the majority to carry matters to extremities by refusing them. The ordinance supply was unanimously agreed to on Friday the 20th Feb. and the rest were allowed to proceed in their usual course. Previous to this business Mr Powys moved an address to the king, expressing "the reliance of the house on his royal wisdom, that he would take such measures, as might tend to give effect to the wishes of his faithful commons, already presented to his majesty." Mr Eden proposed an amendment by inserting after "measures, as"—the words "by removing such obstacles as this house had declared to stand in the way of forming a firm, extended, efficient, and united administration, such as this house had described to be requisite in the present critical and arduous state of public affairs." The motion thus amended, after a long debate, was carried by 199 against 177 ; and the address ordered to be presented by the whole house. This was done on the 25th, and on the 27th the speaker reported his majesty's answer ; wherein, after "assuring them of his earnest desire to put an end to the divisions and distractions of the country, he declared, that he could not see that this would be advanced by the dismissal of his ministers ; that no charge was suggested against them, nor any one of them specifically objected to ; and that numbers of his subjects had expressed their satisfaction on the change of his councils."—The consideration of his majesty's answer was deferred to the 1st of March, when a 2d address was ordered to be prepared. In this, the house humbly claimed it as their right and duty, to advise his majesty touching the exercise of his prerogative ; and, after stating the substance of their former resolutions, concluded with a repetition of their request, "that he would be pleased to lay the foundation of a stable government, by the previous removal of his ministers." The necessity of presenting this address

was inferred from the evident appearance of a settled plan formed by the secret advisers of the crown, for degrading the importance of the house of commons, by destroying the confidence of the people in their representatives. Previous to this, this object had been pursued by a corrupt influence exercised in the house, in support of certain ministers and measures odious to the nation. At that time petitions from the people were despised and it was affirmed that the sense of the people could only be collected in that house. But when by the acts passed in 1782, the influence of the crown in that house, was almost entirely annihilated, the resolutions of that house were attempted to be trampled upon, and the house degraded. The people were now artfully incited to appeal from the natural guardians of their liberties, to that very power, against the encroachments of which, it was instituted to protect them. Three points in the king's answer were particularly animadverted on ; but the 2d of these, "The numbers of his subjects had expressed their satisfaction at the changes made in his councils," was severely censured, as leading to a most dangerous innovation on the constitution. It was proved from instances in the reign of James II. that addresses might be procured in support of the most dangerous measures ; and it was argued, that allow ministers to appeal, at their option, to the parliament to the people, or *vice versa*, would be to establish a precedent subversive of the form, as well as essence of the constitution. In answer to these remarks, the friends of ministry insisted chiefly on the smallness of the majority, which the resolutions had been carried, and the necessity of resisting any encroachment on the royal prerogative, and of preserving the balance of the branches of the legislature, wherein the beauty and advantages of our constitution consisted. After a long and warm debate, the address was agreed to by a majority of 201, to 144. On the 4th March it was presented to the king, the speaker and a numerous body of the members : when his majesty returned an answer to the former ; with the additional remarks, "If there were any ground for the removal of ministers, it ought to be equally a reason for admitting them as part of the extended and united administration : that he had never called in question the right of the commons to offer him their advice on every proper occasion touching the exercise of his prerogative ; and that he will be ready at all times to receive it, and give it the most anxious consideration." Mr Fox moved that his majesty's answer be taken into consideration on Monday next, which was agreed to. Next day, March 10th, he moved to postpone the mutiny bill, till after the consideration of the king's answer, on the 11th. The secretary at war was surprised at the proposal of delaying what concerned the public peace. Sir Adam Ferguson observed, that "money had already voted for the subsistence of 17,000 men the king, if parliament were dissolved, could keep the army together, by his royal authority." But the house exclaimed, as with one voice, "No !" Mr Eden expressed his horror at the sentiments of Sir Adam, and added, it was evident that ministers wanted the mutiny bill passed.

night dissolve the parliament. Mr Powys said ministers would indulge the house a day to weep, with 24 hours to mourn over the fall of the commons." Mr Rigby treated the idea of the lords (whom some fool or other, I, had called the *hereditary representatives of the people*), altering the mutiny bill, with great diffidence.

If the lords made the smallest alteration in the house ought to throw it out, be the consequence what it might, or their independence of importance were gone for ever. He reproached the doctrine that the king could keep up his government without a mutiny bill. The votes being called, there were for Mr Fox's motion against it 162. On the 8th Mr Fox, after a long speech, wherein he recapitulated every argument since his dismissal, moved, "That an address in representation be presented to his majesty to testify the surprise and affliction of this house on receiving the answer, which his majesty's advisers have advised to the dutiful and seasonable address of this house, concerning one of the most important acts of his majesty's government." This representation being uncommonly long, all only quote a few of its most striking passages.

It expressed their "concern, that his majesty should still be induced to prefer the opinions of individuals to the repeated advice of the representatives of his people in parliament assembled: a preference of this nature is as injurious to the interests of the crown, as repugnant to the principles of our free constitution: That systems of government on such a preference are not entirely new, but have been the characteristic features of unfortunate reigns, the maxims of which are justly exploded:—That no administration, however legally appointed, can serve his majesty the public, with effect, which does not enjoy the confidence of this house: That in his present administration we cannot confide; the circumstances under which it was constituted, and the principles upon which it continues, have created suspicions, that principles are adopted, and measures entertained unfriendly to the privileges of the house, and to the freedom of our excellent constitution; that we have made no charge against any of them because it is their removal and their punishment, which we have desired: we are warranted by the ancient usage of the house to desire such removal without making any charge: that confidence may be very prudently withdrawn, where no criminal process can be instituted: that although we have made no criminal charge against any of his majesty's ministers, yet we have stated to his majesty very forcible reasons against their continuance. That his majesty's advisers should have no interests but those of his majesty and their constituents, whereas individual advisers may have very different motives. We express our gratitude for his majesty's assurances, that he does not call in question the right of this house to offer their advice to his majesty; to lament that these most gracious expressions do not a little contribute to increase our suspicions of those men who have advised his majesty, to resist contradiction to these assurances, to neglect the advice of his commons, and to retain in office an administration, whose continuance

we have so repeatedly condemned. To represent, that it has anciently been the practice of this house to withhold supplies until grievances were redressed; and that if we were to follow this course in the present conjuncture we should be warranted in our proceeding, as well by the most approved precedents as by the spirit of the constitution; but if, in consideration of the very peculiar exigencies of the times, we should be induced to waive the exercise, in this instance, of our undoubted legal and constitutional mode of obtaining redress, that we implore his majesty not to impute our forbearance to any want of sincerity in our complaints, or distrust in the justice of our cause. That the prosperity of his majesty's dominions in former times has been, under divine providence, owing to the harmony, which has for near a century prevailed between the crown and this house: That we feel the continuance of the present administration to be an innovation upon that happy system: That we have done our duty in pointing out the evil and imploring redress: that the blame and responsibility must now lie wholly on those, who have presumed to advise his majesty to act in contradiction to the maxims which have hitherto governed the conduct of his majesty, as well as every other prince of his illustrious house; upon those who have neglected the admonitions of the representatives of his people, who have thereby attempted to set up a new system of executive administration, which wanting the confidence of this house, and acting in defiance to our resolutions, must prove at once inadequate by its inefficiency to the necessary objects of government, and dangerous by its example to the liberties of the people."—This representation was the last successful effort of opposition, and was carried only by 191 to 190. Considering all the circumstances of this extraordinary contest, (which is unparalleled in the annals of the British parliament,) it is surprising, that so few instances of defection to the court party should have occurred. To a conviction of the justice and importance of the cause, in which they were engaged, some will doubtless ascribe this steadiness in many; and a share of it may also be attributed to the keen exertions of those members of the coalition, who wished to rescue that measure from the aspersions of its being founded merely on selfish and interested designs. We have enlarged the more upon this portion of the history of Britain, that, from the first introduction of Mr Fox's India bill, (§ 117,) to this period, the disputes between the parties involved a greater number of important constitutional questions, affecting the privileges and prerogatives of the different branches of the legislature, and upon which the most disinterested patriots were divided in opinion, than any that had occurred since the revolution.—On the 10th of March the mutiny bill passed without a division, when Messrs Ridley, Powis, and others lamented the *conquered and degraded* state of the house. Lord Hinchinbrook however informed the house that their representation had been laid before his majesty and graciously received. On the 12th Mr Sawbridge brought forward a proposition for a parliamentary reform. The state of the representation in England, he said, was very inadequate,

quate, and infinitely more so in Scotland, where not above one man in 100 had a vote for a member. He therefore moved for a committee of inquiry on the representation of the people. Mr Ald. Newnham seconded the motion. Sir R. Clayton supported it, and declared himself ready to sacrifice his borough interest. Mr Dempster avowed himself a friend to it, and said that "the people of Scotland would be very grateful if one in 100 were allowed to vote; but in fact not one in 1000 had that privilege. Previous to the reign of Charles II, every 40 s. freeholder had a vote, in Scotland, as well as in England; but in that arbitrary reign, the right of voting was confined to those who held their lands from the crown, which has been continued ever since." The motion, though supported by the abilities of both Mr Pitt and Mr Fox, was, after a long debate, rejected by 141 to 93. On the 22d the American trade bill was passed; and on the 23d Mr Pitt was repeatedly asked by different members, if parliament was to be dissolved, but gave no answer. All the supplies had now been voted, to the amount of ten millions, but except the land and malt tax bills, no money had been raised or appropriated to specific services. It was insisted, however, that the voting of the supplies would be a sufficient justification of ministry in issuing money. On the other side it was urged that the house having resolved that such issuing of the public money would "subversive of the constitution," (§ 120,) no plea of necessity could avail, as the emergency would be wilfully created by those who should advise a dissolution. Next day, however, the parliament was prorogued, and on the 25th dissolved by proclamation. No parliament ever sat in Britain, that was engaged in deliberations of greater importance; that caused more signal revolutions in the administration of public affairs, or that saw the principles of the British constitution more violently agitated, yet ultimately established.

(123.) ENGLAND, HISTORY OF.—CONSEQUENCES OF THE DISSOLUTION OF PARLIAMENT, IN 1784. KING'S SPEECH TO THE NEW ONE, &c. The advantages, which ministers possess over their opponents, upon a premature dissolution of parliament, from their knowing the precise time when the writs will be issued, are at all times considerable; but at this time various circumstances concurred to throw great additional weight into the ministerial scale. During the 3 last months, the majority in the house of commons seemed more anxious to prevent a dissolution, than to provide for their re-election when it should happen. They confined their views so entirely to the objects for which they were contending in parliament, that they totally neglected almost every other. They saw addresses poured in from every quarter, which they made few and at best but feeble attempts to invalidate by counter-petitions. The popular voice, being thus almost entirely on one side, appeared to be more general than perhaps it really was. Thus ministry acquired such strength at last, that instances occurred in the subsequent elections, of not only friendship and gratitude, but even dependency itself giving way; the agents and servants of not a few great men, being found acting openly and

avowedly against the interest of their employers. Nor were the objects of contest between the parties in parliament sufficiently understood by the people in general, to render the cause of the majority popular. The state of the British empire in the East, was little understood, and less felt by them; and the privileges of the house of commons, though the sole constitutional foundation of the people's liberties, did not appear, in view, to have such a necessary connection with them, as to lead the greater part of the people to interest themselves in the contest. The pretexts for the struggle for the preservation of the democratic part of the constitution, appeared therefore, to the greater part of the public, to be nothing more than a mere contest for power between the ministry and the opposition. On the other hand, ministry possessed every advantage, to prepare at leisure an event at all times in their power, and a period of which they concealed with the most caution from their watchful opponents; and they thus kept in a state of inactive suspension, the dissolution at last burst upon them, totally almost universally unprepared. Thus power, activity, popularity, and ministerial influence, at once exerted, on a field neglected and deserted by their adversaries. The event was such as might be expected. Upwards of 100 members of the last parliament lost their seats, and of these the far greater part were supporters of the late ministry. So complete a rout of the opposition was effected one of the strongest and most powerful parties, that ever existed in Britain, is not to be paralleled in the annals of parliament. On the 18th of May, both houses being assembled, the commons re-elected Mr Cornwall, the late speaker. Next day, his majesty, in his first speech from the throne, "assured them of his satisfaction in meeting them, after recurring in so important a moment to the sense of his people; and of his reliance, that they were animated by the sentiments of loyalty and attachment to the constitution, which had been so fully manifested throughout the kingdom." He directed, "his attention to the maintenance of the public credit to the support of the revenues, and to the state of the E. India company: and, after warning them against adopting any new measures for the regulation of these last, which might affect the constitution and our dearest interests at home, concluded by expressing his inclination to support and maintain in their just balance, the rights and privileges of every branch of the legislature." Before the motion was made for an address, Mr Lee stood up in the house, that the high bailiff of Westminster had neglected to make a return to the writ of election, on pretence of not having finished the scrutiny into the legality of the votes, and therefore moved a resolution declaring it to be "his duty to return two citizens to serve for the city." This motion was seconded by Mr Sheridan, but after a long debate, was negatived by a majority of 283 to 136. The address was then moved and read, but the strong expressions contained, of satisfaction and gratitude to his majesty for having dissolved the late parliament, occasioned a warm debate. The necessity of having recourse to that measure, to settle a firm and

tutional administration, was strongly urged on one side, and as strenuously denied on the other; unless it could be proved that the existence of the then present administration was necessary to the constitution. As to the sense of the people, it was asked of Mr Pitt, on what grounds could he pretend, that it had been collected in new elections, when he himself had enforced the necessity of a reform, on the very supposition, that the people, as the law then stood, had little to do with them? An amendment was proposed, by the E. of Surry, to leave out a paragraph, "thanking his majesty for dissolving the late parliament;" which was seconded by Col. North, and occasioned a long and warm debate. Mr Fox, who, on this occasion, took seat as member for *Kirkwall* in Orkney, vindicated the conduct of the last parliament in a speech of an hour long. On Tuesday morning at one, an amendment was rejected by 285 to 114. On 25th May, Mr Fox presented a petition from itself, complaining of an undue return for Westminster; which was objected to by Lord Mulgrave; and moved it to be the opinion of the house, that it did not come under the description in *Willems's* act, no members having been returned, which after a short debate was agreed to without a division. Another petition from Mr Fox was presented by Col. Fitzpatrick, complaining of the high bailiff of Westminster, in making return, and requesting to be heard by council, which was granted. On the 28th, a counter petition from the high bailiff was presented by Lord Mulgrave, praying to be heard in answer to Mr Fox's which was also granted. On the 2d June, Lord Mulgrave presented a petition from several electors of Westminster, praying that the high bailiff might be allowed to proceed with the scrutiny. This was ordered to be considered with other petitions. Mr Corbett, the high bailiff, being called to the bar on the 7th, stated as one of his reasons for granting the scrutiny, that in a recent contested election, there had been only 10 and odd votes, but that in this instance there were above 12,200; whence he supposed a return could not be such an increase. On the 8th, Mr Ellis moved "that the high bailiff be directed to make return of his precept, of the members chosen in pursuance thereof." Lord Mulgrave opposed the motion. The lord stated, disapproved of the English method of holding elections, and said that in Scotland elections were conducted so as to preclude the necessity of a scrutiny, no man being admitted to poll who had not certified his qualification. He supposed the sheriff should have made the return, and a new election should be ordered. Sir James Mackintosh went over the whole of the case, and said the conduct of the high bailiff, if suffered to pass without censure, tended to subvert the very usefulness of the existence of parliament. Mr Powells expressed entire disapprobation of the high bailiff's conduct, and of that of the house, should they negative the question. The returning officer was by law obliged to return the two who had a majority of votes. He assured the house, he wished to see a strong government carrying on measures for the public good; but a strong government carrying on measures for the public evil.

OL. VIII. PART II.

on prosecutions to distress individuals he despised, Mr Fox entered fully into the merits of the cause, and considered it as the cause of British electors in general. Not one bad vote had been given for him. He accused ministry of interfering to deprive the Westminster electors of the exercise of their rights. The military had been called out in a most unconstitutional manner; the civil power, instead of preserving the peace, had been the immediate cause of riot and tumult, and the instruments of committing murder, &c. He concluded by insisting that the house should either adopt the motion, or order a new writ. Mr Pitt replied to Mr Fox, denied his charges as calumnious, and vindicated the high bailiff. At half past 4 A. M. the motion was rejected by a majority of 195 to 117. Lord Mulgrave then moved, "That the high bailiff of Westminster do proceed in the scrutiny with all practicable dispatch;" which, after another warm but short debate, was agreed to, about half past 6. On the 14th June, Mr Burke made his proposed motion, respecting the dissolution of parliament. In his introductory speech, he examined at great length and with much freedom, "the dangerous principles on which that act of power had been executed and defended. The subject appeared to him of the utmost magnitude and importance: His whole mind and soul were full of it. A parliament had been sentenced, condemned and executed, and no notice had yet been taken of so extraordinary an event! If the meanest subject had died suddenly or by violence, an inquest would have taken cognizance of the case, and inquired into the causes of his death; but the parliament of Great Britain had been put to a violent death, and no coroner had yet held an inquest on the body! No enquiry had been made, whether it had been *felo de se*, or *murdered*, or *jure coactus*. Did the people then think the sudden death of a parliament was a subject too trifling for enquiry? Or did they think, that all that might have been apprehended from it had perished with the parliament. He feared the fatal consequences would long survive it, and be entailed on future parliaments. Much had been said of the sense of the people, as the grounds on which ministers rested their defence. He confessed, that the sense of the people, however erroneous at times, must always govern the legislature: but it was difficult to collect that sense: it was the duty of the more enlightened part of the community to resist it, when the people were misled. He did not think the wiser part of the public approved of the dissolution, or disapproved of the measures, which were the occasion of it. The people might be divided into three classes; 1. Persons, who, dazzled with the lustre of the crown, never think that government can be in the wrong; political high fliers, who make it a point to support the crown *à tort et à travers*; this class was very numerous, and in it, he was sorry to add, were many respectable characters. 2. Those who, though sworn enemies to the crown, were ever ready to fall upon the house of commons, because that house is the constitutional guardian of the British monarchy. These two bodies united in running down the house of commons, though with the most opposite views. 3. All those who

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did not enter into the other two classes: the moderate and impartial, who, alike friends to the crown, and to the democratic part of the constitution, wished to maintain both in their respective prerogatives and privileges. Of these, full three fourths went heart and hand with the late house of commons: the other fourth had been driven by misrepresentation into a confederacy with two classes, whose principles they equally detested, the lovers of absolute monarchy, and the sworn enemies of regal government. He trusted that many of them had lately been undeceived. It was the duty of the house to warn the remainder of the dangers to which they exposed their liberties, through that delusion. He feared there was a settled plan to destroy, not the form, but the essence and efficacy of the house of commons. Doctrines big with danger to the constitution had been broached within the two last years, first by the E. of Shelburne, and lastly by the minister, who had his political education at the feet of that Gamaliel; who, at the opening of the session before the last, made the king say, "The people expected."—This assumption of the *tribunitian power* by the sovereign was truly alarming. When Augustus modestly consented to become the tribune of the people, Rome gave up into the hands of that prince, the only remaining shield she had to protect her liberty. The tribunitian power in this country was wisely kept distinct from the executive: It is constitutionally lodged in the house of commons. To that house the people ought to carry their complaints, even when directed against its measures. But now they were taught to pass by the door of that house, and supplicate the throne to protect their liberties. He warned the members to beware of this *double house* of commons, which ministers were erecting on their delusion:—the commons in parliament assembled, and the commons in corporation and county meeting dispersed. An artful minister would craftily play off the one against the other; he would make use of a pliant house of commons to repress the people; and of a deluded people to awe a refractory or independent house of commons. If the proceedings of the late parliament had been really disagreeable to the people, why had they not petitioned that house against those proceedings? If they had, and their prayer had been disregarded, or treated with contempt, addresses to the throne for a dissolution would have been proper. When public economy became the general wish of the people, petitions were presented, not to the crown, but to the house of commons: but means had been contrived of late so to delude the people, as to make them the very instruments of the degradation of that branch of the government, the destruction of which must be attended with the loss of their liberty." Mr Burke next vindicated the East India bill, upon which subject, as we have already given so full an account of it, (§ 117—119), we need only quote his concluding remarks.—"But had (he said) his right honourable friend's bill been as bad as some represented it, still the king could not constitutionally assign the existence of such a bill as his reason for dissolving the parliament: for 1st, he ought not to have known that such a bill existed; and 2dly the house

had a right to entertain whatever bill it pleased, even if it were possible that it could be *impossible*; or if it were even for lopping off a whole branch of the *prerogative*. A bill of exclusion had been entertained by the parliament; and if to day should come, when either a member of the house, or the whole house should be made responsible for a part taken in any bill, on that day would the liberties of England expire." He then produced a representation to be presented to the king, consisting of many sheets of paper, folded like a lawyer's brief, which excited a laugh. He said he "meant his motion as an *epitaph* to the memory of his *departed friend*, the last parliament; that he chose to follow the *corps* to the sepulchre, in the certain hopes, that through the merits of the *good works* of the last parliament, it would have a glorious and joyful *resurrection* and become *immortal*!" Mr Wyndham seconded the motion, but no reply was made to the speech. The demonstration employed the speaker an hour to finish it. It was admired as a beautiful defence of the last house of commons, and contained a keen censure on ministry, as well as several strictures on the king's speech; particularly on the expression "*just balance*," which Mr Burke reproached as "new, unusual, wholly foreign to parliamentary usage," and "leading to hazardous theories," and "mischievous innovations in the constitution." At its length precludes a possibility of inserting it, we must refer the reader to the *Ann. Register* for 1814, p. 151—163. It was negatived without a division.

(124.) ENGLAND, HISTORY OF.—COMMUTATION ACT.—MR PITT'S NEW E. INDIA BILL—FORFEITED ESTATES RESTORED; AND SIGHTS CLOSED, &c. On the 21st June, Mr Pitt moved several resolutions, as a foundation for the act, here called the *Commutation Act*. He stated, that the illicit trade of the country had increased to so alarming a height as to endanger the existence of several branches of the revenue, particularly that of tea. The committee on smuggling found, that only 5,500,000 lbs of tea were sold annually by the E. India company; whereas the annual consumption in Britain was estimated on good authority, to exceed 22 millions; so that the illicit trade in this article was more than double the legal. To remedy this evil, he proposed to lower the duties on tea, to so small an amount, as to make the profit on the illicit trade not adequate to the risk, by reducing the duty on tea from 10 to 12½ per cent; and as this would cause a deficiency in the revenue of 600,000 l. a-year, to make it up by an additional tax on windows; which he showed, would prove a commutation very favourable to the people, and at the same time tend to relieve the E. India company, by opening to them a vent for 12, instead of 5½ millions of pounds of tea, and thus enable them to employ 20 more large ships. The bill was passed, after a warm opposition in both houses. Mr Pitt next entered upon the arduous task of regulating the E. India company's affairs. This he proposed to do by 3 bills. The first was to enable the company to divide 8 per cent interest on their capital. By the dissolution, the committee on this subject had been prevented from making any progress, and though it had been resumed at early a period

ble in this session, yet before any report could be made, the house was under the necessity of either authorizing the company to make a dividend, without any information relative to their abilities, to endanger their credit, by refusing its consent. All the disgraceful and dangerous consequences of this dilemma were urged by the late ministers, who proposed as the safest measure to make the dividend only 6 per cent. It was admitted on all sides, that the affairs of the company were not in a flourishing condition; and it was voted as an act of mockery and injustice to the public, that, while the company were applying to parliament for a large pecuniary relief, they should yet divide among themselves as much as they had divided in their most flourishing circumstances; and that they should lay the whole burthen of the distresses occasioned by their own mismanagement upon the public, and not bear any part of it themselves. It was replied, that the company's distresses had not arisen solely from their own faults, as they had partaken in the general calamity occasioned by the war. The bill passed in the lower house without a division, and the upper, after a warm debate, by a majority of 28 to 9. Mr Pitt's 2d bill allowed the company a respite of duties; enabled them to accept of debts beyond the amount prescribed by former acts; and established their future dividends. These propositions gave rise to frequent debates. Mr Pitt's partiality to the company was allowed to be justly merited, and he gave them proofs of his gratitude in the commutation act, the dividend bill, and the present bill. But hitherto, it was alleged, he was only paying his debt out of other people's pockets: It remained to be seen, in his opinion, whether his better government, whether he would be as ready to surrender to them his ministerial power, as he was to assist them with the public money. Mr Dempster moved as an amendment, that the company should pay 5 per cent for the money owing to the public; but the motion was rejected. The extreme inconsistency, between the 3d object of this bill and the first, was argued with great force. To support the first, it was necessary to shew, that the company's affairs were in a deplorable state, as to stand in need of every possible assistance; but to justify the last, it was requisite to prove, that they were in so flourishing condition, as to afford an enormous dividend. The preference given by the minister to the company's interests over those of the public, already weighed down and sinking under heavy taxes, was strongly urged; and the house was warned against the rapid strides with which the factions of the India company, after plundering and razing the east, were advancing to control and interfere over the government and councils of the kingdom. After several divisions, in which the ministry carried every point by large majorities, the bill passed both houses. Mr Pitt's 3d bill, "for the better government of the affairs of the E. India company," though formed upon the same model with the one which he had brought in the last parliament, (§ 121,) yet differed considerably from it in several points. The powers of the board of control, which, in contrast to the

plan of the late ministry, and in compliance with the temper of those times, were kept as subordinate as possible, were now greatly enlarged. In urgent cases, which might not admit of delay, and in cases of secrecy, which might not admit of previous communication, they are enabled to transmit their own orders to India, without being subject to the revision of the directors. It also vests in the governor general and council, an absolute power over the other presidencies in all points relative to transactions with the country powers, and in all applications of the revenues and forces in time of war; with a power of suspension in case of disobedience. The 2d part of it contains various internal regulations. The clauses relative to the debts of the nabob of Arcot, to the disputes between him and the rajah of Tanjore, and to the relief of dispossessed zemindars, and other native land-holders, were adopted from Mr Fox's bill, (§ 117,) with some exceptions and limitations. Various restrictions are also laid upon the patronage of the directors, and retrenchments ordered in the company's establishments. The 3d part relates to the punishment of Indian delinquents. All British subjects are made amenable to the courts of justice in England, for all acts done in India. The receiving of presents is declared to be extortion; and disobedience of orders and all corrupt bargains to be misdemeanors and punishable. Governors of settlements are empowered to seize all persons suspected of illicit correspondence, and to send them to England, if necessary. Every servant of the company is required on his return to England, to deliver in upon oath to the court of exchequer, an inventory of his real and personal estates, and a copy of it to the directors for the inspection of the proprietors; and in case any complaint should be made thereon, by the board of control, the court of directors, or any three proprietors possessing stock conjointly to the amount of 10,000l, the court of exchequer are required to examine the person upon oath, and to imprison him till he shall have answered the questions put to him, to their satisfaction. Any neglect or concealment is punished by imprisonment and forfeiture, and incapacity of ever serving again. Lastly, for the more speedy prosecution of crimes committed in the E. Indies, a new court of justice is erected; consisting of 3 judges, appointed by the 3 courts, 4 peers, and 6 members of the house of commons: the 4 peers to be taken by lot out of a list of 26; the 6 commons out of a list of 40; and both lists to be chosen by ballot. Liberty is given to the party accused, and to the prosecutor, to challenge a certain number of these. All depositions of witnesses taken in India, and all writings received by the directors, with copies of those sent out by them, shall be received as legal evidence. The judgment of the court is made final, and extends to fine, imprisonment, and declaring the party incapable of ever serving the company. This bill was most strenuously opposed in every stage of its progress through both houses. The extension of the power of the board of control was objected to, as incongruous to the principle, and insufficient for the purposes, of the bill. The enlarged

powers conferred on the governor general were objected to, as an inversion of the order of government, which requires that authority exercised at a distance from the controlling power, and subject to almost insuperable temptations, should be as limited as possible. The bill was founded on these notorious facts,—that the government of the company at home, in the hands of the directors, was weak and impolitic; and that the conduct of their servants abroad was disobedient, cruel and rapacious; yet the bill confirmed the government in the hands of the former, and increased the powers of the latter! A board of control was indeed instituted; but this confusion of all the essential powers of government, the nominal sovereignty of the court of directors, the arbitrary superintendence of the board of control, and the despotic power conferred on the governor general, seemed to be the most complete recipe for composing a weak, inefficient, and corrupt government, that human invention could suggest. It was answered, that the whole plan was necessarily an experiment, but it was evident, from the form of our own polity, that a mixed government did not imply a weak or inefficient one: and the great power vested in the governor general was defended as best suited to the prejudices of the country. In the 2d part, the clauses, it was said, respecting disobedience, the commencing of wars, and the succession to offices by seniority, were rendered nugatory by exceptions and limitations. The inefficiency of the clause relative to oppressed native landholders, the ruinous delay in the mode of proceeding for their relief, and the abuses to which it was liable, were strongly objected to: but these clauses were all defended on the necessity of precautions against events, wherein a discretionary power might be necessary. The last part of the bill met with the most violent opposition; and Mr Pitt was called on, but in vain, to submit it to the free judgment of the house, by making it a separate act. Trial by a jury of peers was insisted on as a right so sacred that the slightest attempt ought not to be made to infringe upon it. The obligation to swear to the amount of property, and the powers granted to courts of putting interrogatories, to force persons to criminate themselves, were inquisitorial proceedings unknown to Britons.—Notwithstanding the popular odium likely to attend such measures, Mr Pitt defended the bill in all its parts; insisting that there were crimes committed in India, for which the common law provided no redress. At the same time he vindicated these clauses upon the principle of martial law. The bill at last passed both houses, after frequent divisions in which ministry were supported by very large majorities. On the 30th June, Mr Pitt opened the budget, which consisted of new taxes on candles, coals, bricks, hats, horses, linens, cottons, ribbands, ale and beer licences, game licences, paper, hackney coaches, gold and silver plate, lead, postage, and silk, all of which passed with little opposition, except the additional duty on coals, which was rejected. These taxes Mr Pitt calculated to produce 930,000*l*. On the 1st July, Sir T. Dundas informed the house, that a dreadful famine raged in the Shetland islands, and moved that a com-

mittee be appointed to inquire into the distressed state of the inhabitants. After some conversation, the motion was withdrawn, and next day Mr Pitt, delivered from his majesty a petition, which had been presented on that business. On the 9th the house went into a committee upon it, the marquis of Graham in the chair; when Sir T. Dundas said, that the people were exceedingly distressed both for provisions and money, as they had met with great losses by the death of their cattle, and that fish was at this time almost their only food. Mr Dempster then moved, that an address be presented to his majesty, praying the 500 quarters of barley, and 40 tons of beef might be sent to Shetland, for the relief of the poor, which was agreed to. On the 30th July, Mr Burke, after a long speech on E. India, wherein he mentioned the famine in Oude, the murder of Almas Ali Cawn, a native of rank, who had been, by order of governor Hastings, betrayed, seized, and put to death, without any charge, trial or condemnation, and the treatment of the princesses of Oude, who had been seized, plundered of their property, and turned into the streets in misery, with a variety of other cruelties practised by the chief servant of the company, moved "That there be laid before the house copies of all papers, relative to the seizing and putting to death of Almas Ali Cawn," which was seconded by Mr Sheridan, and agreed to. Mr Burke next moved "That there be laid before the house copies of all papers relative to the money demanded of the princesses of Oude in 1761," which was seconded by major Scott. He then moved, that there be laid before the house, the produce of the sale of the jewels, &c. taken from these princesses; which was objected to by Mr Pitt, who moved the order of the day; whereupon Mr Burke made a most pathetic appeal to the feelings of the house; reminding them "that there was a God who saw and knew their proceedings, and punished iniquity, &c. and atoning the loss of America, and the misery at home, by our iniquitous and corrupt dealings with the innocent natives of Indostan." The order of the day, however carried. On the 2d August, Mr Henry Dundas after a suitable introduction, respecting the bravery and loyalty of the Scots Highlanders, moved for "leave to bring in a bill to repeal the act, 25th Geo. II. which confiscated certain estates in Scotland, and to empower the crown to restore them to the right heirs, under certain restrictions." This popular motion met with universal approbation from the whole house. The only opposition the bill received, was in the upper house from lord Thurlow and lord Loughborough; whose chief objection was founded upon its not extending to the estates forfeited in 1715. On the 3d Aug. Mr Dempster moved for leave to bring in a bill for the abolition of the remains of vassalages in Scotland; which was granted. On the 10th Aug. the session was closed with the usual formalities:

(125.) ENGLAND, HISTORY OF.—WESTMINSTER ELECTION: EAST INDIA AFFAIRS, &c. The 2d session was opened, Jan. 25th 1786, by a speech from the throne, wherein his majesty particularly recommended the final adjustment of the

mercial intercourse between Britain and Ireland and the further suppression of smuggling. The first business of importance that came before the House was the Westminister election, the contest in which occasioned repeated discussions and divisions. At last, upon a motion of Mr. John Sawbridge, that the high bailiff be ordered to make a return forthwith, which was agreed to by a majority of 161 to 123, the scrutiny was quashed, and Lord Hood and Mr. Fox read, on the 4th of March. On the 16th Feb. Francis called the attention of the House to the civil establishment of Bengal, which, he said, risen from 12,000*l.* the sum in 1774, to the enormous sum of 927,945*l.* a year, (a sum greater than the civil list establishment of Britain, in consequence of the whole power having devolved on Hastings. Among the particulars of this increase, he mentioned a new salt office, of which the president and 3 members received salaries amounting to 72,807*l.*; a board of customs at Calcutta, the salaries of which, to 3 officers, were 70*l.*; a new committee of revenue, of 5 persons, who received 47,350*l.* annually; an agent in charge at Fort William, whose average profits were 15,970*l.* a year; besides 200*l.* per annum as a master; a committee of grain, whose salaries were 14,000*l.* a year; paymasters of forces, who received 43,670*l.* per annum; a paymaster and accountant at Lucknow, who has 7640*l.* a year. A salary of 4280*l.* to a resident at Goa, where there was a resident; and salaries to chaplains, engaged to the company of 10,428*l.* though *there is a church in all Bengal*; besides an innumerable multitude of inferior officers and agents, whose profits are immoderate. He therefore moved, "That a statement be laid before the House, of the salaries and emoluments of the officers of the revenue in Bengal, in 1776, 1782, and 1783; and a probable estimate of the expenditure from April 1784, to 16th May 1785. The motion, met with some opposition from major Scott and Mr. Fox, but was agreed to. On the 18th Feb. the E. of Suffolk made a motion in the House of Lords, relating to the nabob of Arcot's debt. So early as April 1782, Mr. Dundas, in the House of Commons, had moved a resolution relative to the suspicious nature of these debts, and their mischievous influence upon the government of the Carnatic. In Fox's India bill (§ 117.) the new commissioners were directed to examine into the origin and justice of these claims, and a cautionary clause was inserted to forbid in future any of the company's servants from acquiring mortgages, or having any pecuniary transactions with the Indian princes. In Mr. Fox's bill, passed in last session, (§ 124.) the cautionary clause was omitted, and the examination of the nature of the debts left to the directors, as far as the materials they are in possession of enable them to do so." And it was enacted, that they shall give such orders to their presidents and servants abroad, for completing the investigation thereof, as the nature of the case shall require; and, for establishing in concert with the nabob such funds, for the discharge of those debts which shall appear justly due, as shall be consistent with the rights of the said united company, the security of the creditors, and the honour and

dignity of the said nabob." The court of directors in consequence of the trust reposed in them, prepared orders to be sent to their council at Madras, in which, after stating the suspicious circumstances under which many of the debts appeared to have been contracted, they direct them, in obedience to the positive injunctions of the act, to proceed to a complete investigation of their nature and origin. These orders, however, were rejected by the board of control, and a new letter drawn up, in which the claims of the creditors were *all*, with some little limitation, established, and a fund for their discharge assigned out of the revenues of the Carnatic. These orders were publicly read at a meeting of the nabob's creditors in England; and on this ground, the E. of Carlisle moved, "That there be laid before the House copies or extracts of all letters or orders issued by the court of directors, in pursuance of the injunctions in the regulating act." The dangerous consequences, of suffering the board of control to supersede the authority of an act of parliament, and the suspicious circumstance of its clandestinely interfering in an enormous money transaction, the management of which was delegated by the act to other persons, were strongly urged by the noble mover, and by lord V. Stormont. Lord Loughborough insisted, that even allowing the board of control not to have been guilty of an arbitrary assumption of power, yet their orders authorize transactions of a most corrupt and nefarious nature, highly injurious to the company, and ruinous to the country. Lords Sydney, Walsingham, and lord chancellor opposed the motion; and lord Rawdon was afraid the papers called for might convey dangerous information to our enemies. The motion was rejected without a division. On the 28th a similar motion was made by Mr. Fox, in the House of Commons, when Mr. Dundas himself opposed it, and defended the board of control, insisting that they are enabled by a clause in the act, to originate orders in cases of urgent necessity, and transmit them to India. He also justified the debts themselves, and cautioned the House not to imbibe prejudices against a board of control but newly instituted. Mr. Smith, chairman of the court of directors, admitted that some debts, ordered by the board to be paid, were just, but that others were of a very different complexion. Mr. Burke, in a long and eloquent oration, entered fully into the subject. He contended, that the board of control had no right to intermeddle in the business; but even admitting such right, they were bound to make the same inquiries as the directors: After some severe remarks on "Mr. Pitt's narrow policy, in attempting, by a rigid inquiry into fees of office, to squeeze the laborious and ill paid drudges of English revenue, while he was lavishing millions without examination, on those who never served the public in any honest occupation at all," he stated, that "ever since the establishment of the British power in India, Madras and its dependencies, which, before that time were among the most flourishing territories of Asia, had wasted away and declined so much, that in 1779, not a single merchant of eminence was to be found in the whole country. During this pe-

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riod of decay, near a million had been drawn from it annually by English gentlemen, on their own private account only. Mean time the nabob had contracted a debt with the company's servants, to the amount of 880,000l.; which, in 1767, was settled at 10 per cent interest: one million sterling had been lent by British subjects to the merchants of Canton, in China, at 24 per cent. In 1777, a 2d debt of 2,400,000l. and a 3d of 160,000l. called the *cavalry debt*, were settled by the nabob of Arcot at 12 per cent. The whole of these 4 capitals, amounting to 4,440,000l. produced annuities of 623,000l. a-year, more than one half of which stood chargeable on the public revenues of the Carnatic. These annuities, equal to the revenues of a kingdom, were possessed by a few individuals of no consequence, situation, or profession." As one proof among many, that these sums, if lent at all, (and if *not* lent, the transaction was not a contract, but a fraud,) were not property legally acquired, but *spoils*, Mr Burke quoted a passage of a letter written by the nabob to the directors:—"Your servants *have no trade in this country*, neither do you pay them *high wages*; yet in a few years *they return to England with many lacks of pagodas*. How can you or I account for such immense fortunes, acquired in so short a time, without any visible means of getting them?"—"Either way, therefore, Mr Burke insisted, if slight enough could not be furnished to authorize a full condemnation of these demands, they ought to be left to the parties, who best understood them."—"But (added Mr Burke) the gentlemen on the other side know, and they *dare not contradict me*, that the nabob and his creditors are not adversaries, but collusive parties; and that the whole transaction is under a false colour and false names. The litigation is not, nor ever has been, between their rapacity and his hoarded riches. No; it is between him combining on one side, and the public revenues and miserable inhabitants of a ruined country on the other. These are the real plaintiffs and defendants in this suit. It is, therefore, not from treasuries and mines, but from the food of your unpaid armies, from the *blood withheld from the veins, and sucked out of the backs*, of the most miserable of men, that we are to pamper extortion, usury, and speculation, under the false names of debtors and creditors of state." Mr Burke next proceeded to examine the particular grounds of these debts. The loan of 1767, he allowed to stand the fairest of the whole, and that he could *convict* it of nothing worse than the most enormous usury. The sum originally bore 36 per cent; afterwards, it was reduced to 25 and 20; where it remained, the interest being all along added to the principal, till at last the consolidated sum was fixed by the company at 10 per cent. Hence he doubted, whether for this debt of 880,000l. the nabob ever saw 100,000l. in real money. The cavalry debt was contracted by the usurped power of those persons, who had rebelliously, in conjunction with the nabob, overturned the lawful government of Madras, in 1777; and the delinquents, to secure a party to support them, dealt jobs about to all who would accept of them. Of this loan, he also doubted if the nabob had ever received a shilling. The English money-job-

bers engaged to pay his cavalry in bills payable 4 months, for which they immediately got at least one per cent per month, and the receipt of a territorial revenue for that purpose was assigned them. Instead of 4 months, it was 2 years before the cavalry's arrears were paid; whence, as they got the revenue all this time, it is probable they paid off the nabob's troops with his own money. As to the consolidated debt of 1777, though the influence obtained a protector, it had not plenty to find an advocate. If ever a transaction called for investigation, it was this. The demand, in current accounts, rose from 1,300,000l. to 2,400,000l. principal. The proprietors never appeared in the same in any two lists. In 1781, the agents for the creditors, were willing to strike off 25 per cent from the capital of a great part of this debt. It was proposed by those who knew the true nature of the debt, and how little favour it merited. But what corrupt men, in their sanguine avowal had not the confidence to propose, they found the chancellor of the exchequer hardly enough to undertake. He has replaced the 25 per cent, and they had abandoned in conscious terror. Instead of cutting off the interest, he has added the whole growth of 4 years usury of 12 per cent to the overgrown principal: and has again granted on this stock a perpetual annuity of 6 per cent, to take place from 1781. "All the acts and monuments, (added Mr Burke,) of the records of perdition; the consolidated corruption of ages; the patterns of exemplary plunder in the *barbaric* times of Roman iniquity, never equalled the present corruption of this single act. Never did *hell* in all the insolent prodigality of despotism, do out to his prætorian guards a donation fit to be named with the largess showered down by the bounty of our chancellor of the exchequer, on the band of his Indian sepoys." Mr Burke next called the attention of the house to the ruined condition of the country; entered into a state of the internal politics of the Carnatic, and the causes of the war with Hyder Ali; described its desolating ravages, while it raged for 18 months without intermission, from Madras to Tanjore; and the redoubled horrors of the famine that ensued, inasmuch that when the British armies traversed the central provinces for hundreds of miles in all directions, in their whole march they did not see one man, woman, child, or four-footed beast of any description! And what (added he) would a virtuous and enlightend ministry do, on the view of such ruins—of such a chasm of desolation as yawned in the midst of those once flourishing countries?—They would have reduced their most necessary establishments; they would have suspended the justest payments; they would have employed every shilling derived from the productive parts, to re-animate the powers of the unproductive. While performing this fundamental duty to justice and humanity, they would have ordered the corps of seditious creditors, whose crimes were their *claims* to keep an awful distance, to silence their insuspicious tongues, to hold off their profane unhallowed paws from this holy work; they would have proclaimed with a voice that should make itself heard, that on every country the first creditor is the *plough*; that this original industry

claim supercedes every other demand. This at a wife and virtuous ministry would have and said. They would thus have laid a foundation for future opulence and strength. on this grand point of the restoration of the try, there is not one syllable in the correspondence of the ministers. They felt nothing and desolated by fire, sword, and famine; sympathies took another direction; they touched with pity for bribery, so long ented with a fruitless itching of its palms; bowels yearned for usury, that had long d its monthly harvest; they felt for peculation which had been for so many years raking in lult of an empty treasury; they were melted compassion for rapine and oppression, licking dry, parched, unbloody jaws. These were objects of their solicitude." Mr Burke next ined the state of the net revenue, the whole hich, he said, amounted, in 1782, only to 0001, nearly the sum allotted by ministers to creatures the private creditors. As to the debt, nothing was provided for it, but an tual surplus, to be shared with one class of private demands after satisfying the two first es. Never was there a more shameful posting of a public demand, which, by the practice of all nations, supercedes every private claim. he mode of settling between the nabob and company, the public and private debts are e to play into each other's hands a game of r perdition to the unhappy natives. The n falls into an arrear to the company. The idency presses for payment. The nabob answers "I have no money."—"Good: But the rs (bankers,) will supply you on the mortgage of your territories." Then steps forward e *Paul Benfield*, and, from his grateful compassion to the nabob, and his filial regard to the company, unlocks the treasures of his *virtuous* industry and for 24 or 36 per cent, on a mortgage of territorial revenue, becomes security to the pany for the nabob's arrear. In consequence his double game, the whole Carnatic has, at time or other, been covered with these locusts, English *soucaras*. During these operations, t a scene has that country exhibited! The uous European assignee supercedes the nabob's re farmer of the revenue; the farmer flies to nabob to claim his bargain; while his servants mur for wages, and his soldiers mutiny for . The mortgage to the European assignee is refused, and the native farmer replaced,— n to be removed on the new clamour of the opean assignee. Every man of rank and land-ortune being long since extinguished, the remaining miserable *luff* cultivator, who *grows* to soil, after having his back scored by the farmer, has it again flayed by the assignee; and is y, by a ravenous, because a short-lived, fusion of claimants, lashed from oppressor to oppressor, whilst a drop of blood is left as the means extorting a single grain of corn. Far from *uing*, (Mr Burke added,) he did not reach the , nor approach it. This tyrannous exaction ight on servile concealment, and that again ed forth tyrannous coercion;—till nothing of anity was left in the government; no trace of

integrity, spirit or manliness in the people, who drag out a precarious and degraded existence, under such a system of outrage upon human nature. The ministers had renewed the company's old order against contracting private debts. They begin by rewarding the violation of the ancient law; They then gravely re-enact those provisions, for the breach of which they had given bounties; and they conclude with positive directions for again contracting the debts they prohibit. They order the nabob to allot 480,000*l.* a-year as a fund for paying the debts before us. For the punctual payment of this annuity they order him to give *soucaras* security. These *soucaras* are no other than the creditors themselves, who thus become creditors again on a new account, and receive an additional 24 per cent for condescending to take the country in mortgage, and being *security to themselves for their own claims*." Mr Burke, after some observations on the motives to this shameful conduct, and on Mr P. Benfield, the man in whose favour all these rules had been violated, concluded with saying—"If the scene on the other side of the globe, which tempts, invites,—almost compels, to tyranny and rapine, be not inspected with the eye of a severe and unremitting vigilance, disgrace and destruction must ensue. For one, the worst event of this day, though it may deject, shall not subdue me. The call upon us is authoritative. Let who will shrink back, I shall be found at my post. Baffled, discountenanced, subdued, discredited, as the cause of justice and humanity is, it will be only the dearer to me. Whoever, therefore, shall at any time bring before you any thing towards the relief of our distressed fellow citizens in India, and towards a subversion of the present most corrupt and oppressive system, for its government, in me shall find a weak, I am afraid, but a steady, earnest and faithful assistant."—The motion, however, was rejected by a majority of 194 to 97.

(126.) ENGLAND, HISTORY OF.—COMMERCIAL INTERCOURSE WITH IRELAND; MR PITT'S NEW REFORM BILL, AND PLAN FOR REDUCING THE NATIONAL DEBT, &c. On the 22d Feb. Mr Pitt moved, that the propositions laid before the Irish parliament by Mr Orde, (see IRELAND,) for adjusting the intercourse between Britain and Ireland be read; after which he remarked the illiberal treatment of Great Britain to her sister kingdom in former times, and inveighed much against that narrow spirit which tended to exalt or enrich one people of the same empire, at the expence of another. After obviating many objections to the propositions, he moved a resolution, "That it is highly important, and for the general interest of the British empire, that an intercourse be finally settled between Great Britain and Ireland on equal terms; and that each country should have a like participation of trade, on Ireland securing that she will pay, in proportion to her growing wealth, such share of the public expence, as may arise from the surplus of her revenue in time of peace." Mr Marshall thought Britain for 7 years past had been giving too much. Lord North protested against a full participation of our trade with Ireland. Mr Dempster approved of the propositions as just, and Mr Fox spoke chiefly against begin-

ing the business in Ireland. On the 3d March, Mr Pitt brought forward the propositions, which were objected to by Sir W. Cunningham, as hurtful to the landed interest of Scotland, and ruinous to the corn trade and farmers. On the 8th a petition from the inhabitants of Glasgow was presented by the lord advocate against them; as well as from Manchester, Liverpool, and several other towns in England. A petition likewise from Manchester, Warrington, and some other towns in Lancashire and Cheshire, subscribed by 80,000 persons, was presented by Mr Stanley, against the late tax on sustains, calicoes, &c. which, after examining witnesses on the subject, was repealed. In the course of receiving these various petitions, it was agreed to revive the act of 1689, against receiving any petition not subscribed by all the petitioners. On the 8th April, in a committee on the late Scots distillery act, gen. Murray in the chair, the marquis of Graham stated, that the regulations in that act had been found oppressive and burdensome; and proposed 3 resolutions as the ground of a new bill; which being agreed to, and reported on the 11th they were approved by the house and the bill ordered in. Mr Pitt, on the 18th April, once more brought forward the popular subject of a parliamentary reform. Having formerly pledged himself to exert all his official weight in favour of it, he now employed his utmost abilities in recommending it to the house; and after a speech of near 3 hours, moved, "That leave be given to bring in a bill to amend the representation of the people of England in parliament." The plan he now proposed was founded on the same principles with his former one, (§ 113.) but differed in several particulars. He proposed to transfer the right of election from 36 of such boroughs, as had already fallen, or were falling, into decay, to the counties, and to such chief towns and cities as were not represented: That a fund should be provided for giving the owners and holders of such disfranchised boroughs, an appreciated compensation: That the taking this compensation should be a voluntary act of the proprietor; and if not now accepted, the money should be laid out at compound interest, until it become an *irrefractable* bait to such proprietors. He also proposed to extend the right of voting for knights of the shire to copy-holders. Mr Fox approved of the spirit of the motion, but objected to the mode, particularly the *purchase* of the boroughs; though he was not against transferring the right of electing representatives from them to the counties, and chief towns and cities. The principal arguments in favour of a reform were derived from the present partial and defective representation of the kingdom at large. It was argued, that an active, reforming and regulating principle, which kept pace with the alterations in the state, was necessary to preserve the constitution in its strength and vigour: That as any part of the constitution decayed, it had always been the wisdom of the legislature to renovate and restore it, by such means as were most likely to answer the end proposed: and that hence had arisen the frequent alterations that had taken place, with regard to representation, both before and at the revolution. The chief objections to a reform, were

that it was not called for by the people in general, nor in particular by the unrepresented large towns and cities, which had the best right to claim the benefit of such a measure: That if innovations of reform were once introduced, new minds differed so much on the subject, that one could know to what extent they might be carried. That what were called *rotten boroughs* were only represented by gentlemen who had the great stake in the country, and consequently were much interested in its welfare, and that of the constitution, as any other representatives, in whatever manner they were chosen, could be: and in fine, that while the rights and liberties of the people were secure under the present representation, it was hazardous to make any alteration. The motion, after many extraneous arguments and much personal animosity on both sides, was negatived, by 248 against 174.—Previous to the opening of the budget, Mr Pitt called the attention of the house to the national finances: in which he gave a very favourable view, from the increase of the revenue both from the old and new taxes. The whole of the public expenditure, he estimated at 14,400,000*l.* per annum: He then gave a comparative statement of the produce of the taxes ending 5th Jan. and 5th April 1784, of those ending at the same periods in 1783: The first of these he stated at 2,585,000*l.*; the second at 2,198,000*l.*; the 3d at 2,738,000*l.*; and the 4th at 3,066,000*l.* From the increased produce of the taxes in these quarters, he made various calculations on their probable amount for the whole year; the highest of which he stated at 12,600,000*l.* and the lowest at 12,000,000*l.* per annum. The produce of the taxes, supposing them to continue stationary, would, on the average of the last quarter, amount to 12,364,000*l.* The land and malt tax, 2,500,000*l.* added to this, would make 14,764,000*l.* Hence he expected a surplus of about a million annually, which he would propose to be appropriated as a sinking fund, to be applied to the discharge of the national debt. As he considered this estimate to be very low, he congratulated the public on the pleasing prospect. But though he wished the house to consider the measure now announced, he did not intend to put it in execution till the ensuing year. To afford proper information, however, he moved, that the increase of the amount of the taxes from 1783 to 1784, be laid before the house. His calculations, however, were much objected to. Mr Sheridan doubted if the new taxes would be so productive as Mr Pitt alleged, and moved that there be laid before the house the net produce of the taxes imposed last session, up to the latest accounts. Mr Dempster congratulated the minister upon the plan of appropriating a sum to liquidate the national debt. But he hoped this would be done as to place it beyond the reach of any ministry, and exempt from all changes in administration. One million, he said, with compound interest would, in 30 years, pay off 22*l.* millions. Such plan he wished to see adopted. The aggregate amount of the supplies, voted in 1785, as stated by Mr Pitt at 9,737,868*l.* The subjects of the new taxes, imposed to raise the sum of 413,000*l.* were male and female servants, and

ps, post horses, gloves, pawn-brokers, and ch-makers licenses, game certificates, bachelors, wheel carriages, and attorneys. Of these tax on maid servants and the shop tax were most unpopular. On the 14th of June, of the whole shop-keepers of London and Westminster, unanimously expressed their displeasure at the latter, by shutting the windows of their shops during the whole day, as well as by satirical inscriptions on the window shutters. An example of London was followed at Bath, &c. Norwich, and many other places.—On 27th April, the lord advocate introduced a bill for diminishing the number and increasing the salaries of the judges of the court of session in Scotland. The former branch of it, being opposed in the committee, on the 3d June, by lord Eden, Mr Eden, and Sir James Johnstone, was withdrawn, and the bill for increasing their salaries was passed by the house. On the 12th May, Irish propositions were brought under the consideration of the house, and occasioned a number of warm debates from that day to the 30th. In several amendments, suggested by opposition, were admitted by ministry. On the 31st a committee was appointed to confer with the lords on them, and present to their lordships the resolutions, to which the house had agreed, on the commercial intercourse with Ireland, along with evidence. On the 17th June, Mr Pitt moved, £150,000 l. be paid to the American loyalists, in satisfaction of their claims; which was agreed to. On 3d June, the house of lords entered upon the consideration of the Irish commercial system; which daily occupied their attention, and occasioned very warm debates, till the 19th, when several amendments, the resolutions were returned for the concurrence of the house of commons.—On the 25th Mr Pitt read an address to his majesty, which, after a long debate, was agreed to, and presented on 29th by the lord chancellor, the speaker of the house of commons, and members of both houses. The address represented, that the two houses “taken into their most serious consideration the important subject of the commercial intercourse between Britain and Ireland, recommending his majesty’s speech, and the resolutions of parliament in Ireland; and after a careful investigation of the various questions arising out of the subject, had come to the resolutions now presented, which they trusted would form the basis of a advantageous and permanent settlement between the two kingdoms: That they had proved on the foundation of the rights of the parent of Ireland, but had found it necessary to introduce some modifications, and to add such provisions as appeared necessary in establishing proposed agreement as just and equitable; for securing to both countries those advantages, to an equal enjoyment of which they are entitled: That his majesty’s subjects in Ireland, being secured in a full participation of the same with the British colonies, must acknowledge the justice of their continuing to enjoy it, on the same terms with his subjects in Great Britain; and the ships and mariners of Ireland, are to enjoy the same privileges with those of Britain, &c. &c. &c.”

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the same provisions should be adopted in Ireland as may be necessary in this country, for securing those advantages exclusively to the subjects of the empire. That this object is essentially connected with the maritime strength of his majesty’s dominions; and consequently with the safety and prosperity of both Britain and Ireland. That they deem it indispensable, that such points should be secured, as may be considered necessary to the existence and duration of the agreements between the two countries: and they can only be carried into effect by laws to be passed in the parliament of Ireland, which is alone competent to bind his majesty’s subjects in that kingdom, whose legislative rights they should ever hold as sacred as their own.” The address concluded, by expressing their “trust, that, in the whole of its progress, reciprocal interests and mutual affection will insure that spirit of union so necessary to the great end in view;” and their “confidence, that the final completion of the measure, while it tends to perpetuate harmony and friendship between the two kingdoms, by augmenting their resources, uniting their efforts, and consolidating their strength, will afford his majesty the surest means of establishing a lasting foundation, in the safety, prosperity and glory of the empire.” To this address his majesty returned a suitable answer, and on the 2d August Mr Pitt introduced a bill for the commercial arrangement, without opposition; after which both houses adjourned to the 27th October.

(127.) ENGLAND, HISTORY OF.—PARLIAMENTARY PROCEEDINGS, IN 1786, ON THE MUTINY BILL, FORTIFICATIONS, MILITIA ACT, &c. ELECTION BILLS, &c. Years of peace, however favourable to arts, sciences, and human happiness, yet as they afford no field for displaying the talents of the hero, so they yield few materials for employing the pen of the historian; unless when important constitutional questions occur in the senate. The principal transactions of the succeeding 7 years, from this period to the commencement of the present war, may therefore be comprised in little bounds.—Previous to the commencement of the 3d session of parliament, the French court had issued an edict prohibiting the sale of various English manufactures in that kingdom; and a similar edict had been published by the emperor, totally prohibiting the importation of any British goods into the Austrian territories. The latter had been excited to this measure by certain articles in a late treaty between the British monarch, as elector of Hanover, and the king of Prussia. To counteract proceedings so prejudicial to the trade of England, commercial treaties were entered into with the courts of Petersburg, and Versailles: and Mr W. Eden was appointed envoy extraordinary on the latter business on the 9th Dec. 1785. This gentleman having been the first projector of the coalition, and a chief mover of the strong resolutions against Mr Pitt, (§ 120, 122.) his acceptance was censured as a signal example of political apostasy. Oriental politics were also revived by the return of governor Hastings, as well as by petitions from the English inhabitants of India, against several clauses in Mr Pitt’s act; particularly those which established an inquiry into their fortunes, and took from them

trial by jury. His majesty opened the session on the 24th Jan. 1786, with a speech informing parliament, "that the disputes, which threatened the tranquillity of Europe, had been brought to an amicable conclusion; that the growing blessings of peace were experienced in the extension of trade, and improvement of the revenue; and that the resolutions of last session had been communicated to the parliament of Ireland, but that no effectual steps had yet been taken to make any farther progress in that salutary work." Among the subjects which early engaged the attention of parliament, was a variation from the usual form, introduced into the mutiny bill, to make it include officers upon half pay, and by brevet; which was objected to in the lower house by Col. Fitzpatrick and Gen. Burgoyne, but passed by 79 to 17. In the upper house, it was still more violently opposed by Lords Stormont, Loughborough, and Sandwich; but the amendment was rejected by 41 to 18. The next important object was the plan of fortifications, originally suggested by the D. of Richmond, and now introduced into the house of commons, by Mr Pitt, who moved it as "an essential object for the safety of the state." To prove its utility, Mr Pitt "appealed to our calamitous situation during the American war: A considerable part of our fleet was confined to our ports to protect our dock yards; whereby we wasted our resources, and impaired our strength, without a prospect of benefit to mitigate our distress." And he asked, "Was the house to stand responsible to posterity for a repetition of similar misfortunes and disgrace?" The motion was supported by lord V. Mahon, lord Hood, Sir C. Middleton, captains Berkley, Bower, and Luttrell, and Messrs H. Browne and Dundas. It was opposed by Mr Balford, Sir W. Lemon, general Burgoyne, lord North, colonel Barré, and Messrs Walwyn, Marham, Wyndham, Courtney, Fox, and Sheridan. The latter entered largely into the question, particularly as it might affect the constitution. "When we talk (said he) of a constitutional jealousy of the military power of the crown, what is the object of our suspicion? What, but that it is in the nature of kings to love power, and of armies to obey kings? This is doubtless plain speaking upon a delicate subject, but the question demands it; and I cannot be suspected of alluding either to the present monarch on the throne, or to the army now under his command. But the possible existence of sinister intentions must enter into the mind of every man who admits an argument on the subject. If this were not the case, we deride the wisdom of our ancestors in the provisions of the bill of rights, and mock the salutary reserve, with which we annually entrust the executive magistrate with the defence of the country." He concluded by advising all sides of the house "to assist in defeating a measure, which, under pretence of securing our coasts, strikes at the root of our great national defence, and at the heart of the constitution itself." This speech appears to have had great weight with the house; for the votes upon the division were exactly equal, both the ayes and the noes amounting to 169; a circumstance unparalleled in the annals of parliament; and the speaker acquired no small ap-

plause from the country gentlemen, by giving the casting voice against the motion. Mr Pitt, however, on the 17th May, revived the question, by moving, "that an estimate of the expence of such part of the plan of fortifications, as might appear most necessary to be carried into immediate execution, be referred to a committee." The money necessary for completing this moderate plan, he stated at 400,000*l*. But this motion was received with such marked disapprobation by the house, that it was withdrawn; and the sum of only 59,780*l*. voted on the 7th June, for completing the new works already begun at Portsmouth and Plymouth. Another measure of considerable consequence repeatedly engaged the attention of parliament, viz. the amendment and reduction of all the militia laws into one act. A bill for this purpose, after repeated debates and divisions, passed both houses. On the 9th March, Mr Marham introduced a bill to exclude pension holding places in the navy and ordnance from voting at elections, which was opposed by Mr Pitt, lord Mulgrave, and Messrs Dundas, Grenville, Pye, Drake, Gageoyne, Sir E. Deering, and Sir C. Middleton; and supported by Messrs Fox, Perceval, Sawbridge, and Sheridan; but rejected by 117 to 41. Though Mr Pitt opposed this bill, upon the principle, that no bad effects were felt from the interference in elections of the persons it was proposed to exclude, yet he supported lord Marham's bill for regulating elections, which was drawn up on liberal principles, and was also supported by the E. of Surry, Sir Jos. Mawley, Sir W. Bouverie, &c. but opposed by Messrs Young, Perceval, and Balford, as well as by Mr W. Grenville, who styled it a system of utopianism and impracticability. It was passed, however, by a majority of 98 to 22, and sent up to the house of lords; where it was powerfully recommended by its author, now E. of Stanhope, and supported by the Marquis of Caermarthen and E. of Hopeton; so that it passed the 2d reading by a majority of 11 to 6, but was thrown out at the third, by 38 to 27. Mr Pitt having on the 7th March, moved for a committee on the annual national income and expence, their report was laid before the house on the 21st, and copies delivered to the members on the 27th. Two days after, Mr Pitt opened his budget, by congratulating parliament on the pleasing prospect which the report afforded, after the country had emerged from a most unfortunate war, which had added such an accumulation to the national debt, before immense, that furnishing nations expected we should sink under the burden. Instead of this he showed by various estimates, that our resources were such, that they were not only equal to the extraordinary demands without any additional burden upon the people, but could afford one million annually to be added to a sinking fund, according to his plan formerly proposed, (£ 126*l*.) for reducing the national debt. This sum he proposed to be placed in the hands of commissioners in quarterly payments to commence on the 5th July, 1786. The million, he showed, by compound interest, would in 28 years, produce an annual income of 4 millions. Mr Fox, among other objections to this plan, said, that 28 years was too long a period

look forward for its effect, as *before that term might probably have another war*. On the 1st of May, Mr Sheridan, after showing that the act of the committee had been founded upon sound principles, moved a number of resolutions, which were all negatived without a division. Mr Fox moved, as an amendment, that if no loan be in the hands of the commissioners, a new loan is proposed, they shall take a loan of the loan, and thus receive the *bonus* for public. Mr Pitt congratulated Mr Fox upon the liberality of this motion, which was unanimously agreed to. Upon the 2d reading of this in the upper house, lord Stanhope moved an amendment, which, though it met with no small cause from lords Loughborough and Stormont, set aside by a previous question. A message from the king being delivered to both houses, viz, "That it had not been found possible to bring the expences of the civil list within the total sum of 850,000*l*. Mr Pitt moved, that "a be granted to defray all incumbrances, and 900,000*l*. should remain for the annual expence of the civil list;" which, after some debate, wherein the motion was contrasted with Mr Fox's bill, (which had enacted, that no debt should be incurred on the civil list,) was agreed by both houses. A motion by Mr Sheridan, printing all tax bills, was rejected by 129 to 10. Many petitions were presented, and a motion by Sir Watkin Lewis was made, for the repeal of the shop tax, which was supported by Mr Sir Jos. Mawbey, Mr Francis, and the members for London, &c. in consequence of which, Mr Pitt proposed several mitigations of the tax, to relieve traders who rented shops under 30*l*. which were afterwards enacted. The petitions in answer to the hawkers and pedlars were not so successful, though their cause was ably supported by the principles of equity and philanthropy, by Mr Pulteney, who moved a bill for the amendment of the late act, (which granted to justices of the peace, a power of imprisoning persons of this promiscuous class, as well as by the lord advocate, Sir Adam Fergusson, Sir Watkin Lewis, and Messrs Powys, Boscawen, Wyndham, Courtenay, Wilberforce, Fox, and H. Browne. The bill however was rejected by 99 to 49. On the 5th of May, Mr Pitt moved, "to transfer a part of the duties on wine from the customs to the excise." The revenue gave way, that the revenue on foreign wine was inferior by 280,000*l*. to what it was 40 years ago. Mr Dempster recommended the utmost care in passing bills that affected the liberties of the subject. Mr Fox opposed the bill on the ground, as an experiment peculiarly rash, though it was also opposed by earl Surry, and Messrs Sawbridge, Watton, Courtenay, and Sheridan, it passed by 71 to 32; and in the house of commons without a division. In June, a message was received from the king, recommending "an extension into the condition of the woods, forests, &c. relating to the crown, that they might be made productive as possible." A bill was accordingly brought in, which contained some clauses, that were opposed in both houses, but chiefly in the commons, where they occasioned a division of 28 to 12, where a protest was entered against the

act, by the D. of Portland, the earls of Sandwich and Carlisle, Dr Wilson Bp. of Bristol, and lord Loughborough. The commissioners appointed were, Sir C. Middleton, Col. Call, and Mr A. Holdsworth.—Mr Wilberforce introduced a bill for amending the criminal laws, which was so much approved in the house of commons, that it passed without opposition: But in the house of lords, it was treated with the severest invective by lord Loughborough, who, during the absence of lord Thurlow, took the lead in all proceedings of that assembly; pleading the cause of experience against innovation, and of liberty against political encroachment. The bill was therefore rejected without a division. On the 28th April, Mr Powys moved for a bill to amend the Quebec act, and to restore the right of trial by jury to the British inhabitants of Canada. The motion was warmly supported by Messrs Courtenay and Fox; but opposed by Mr Pitt, and rejected by 68 to 21. Several measures were brought forward by Mr C. Jenkinson, for the improvement of the navigation and commerce of Great Britain; particularly with regard to its shipping, fisheries, &c. which were agreed to without opposition. East India affairs also occupied a good deal of the attention of parliament during this session; but we have already descanted too largely on these subjects, (§ 116—125.) that we shall not here resume them, farther than just to mention, that Mr Francis' bill, "to extirpate" (as he expressed it) "the principal evils out of Mr Pitt's bill," was rejected by moving a previous question: That Mr Dundas's bill for amending the same act, (which Mr Burke styled, "a full grown monster of tyranny" in comparison of which, Mr Pitt's bill was only "an abortion,") by increasing the power of the governor general, was passed: That an amendment moved upon it by Mr Sheridan, to divide it into two bills, the one respecting the political, and the other the judicial government, was adopted: and that after repeated motions for papers on India affairs, the refusal of some, and production of others; the exhibition of charges against Mr HASTINGS; and the examination of various witnesses on the business, grounds of impeachment were found against him, by a majority of 119 to 79. About the close of the session, a singular occurrence was mentioned in the house of lords. A bill had been introduced relative to the prize money obtained by the capture of St Eustatius: (§ 102.) Lord Rodney said, he had lodged the papers of the merchants of that island, in the secretary of state's office, as documents of treason against them: but on calling for them in justification of his conduct, he was astonished to find, that they had been carried off, and were *no where* to be found. Mr Knox was called in proof of this fact. In consequence of this, the bill was rejected without a division; and two caucuses for 13,000*l*. then depending before the court of appeals, at the instance of Messrs Lindo and Ingram, against lord Rodney and the captures of St Eustatius, were decided against the captors with full costs, on the 5th July. On the 11th the session was ended. On the 2d Aug. His majesty's life was attempted by a mad woman, named Margaret Nicolson, who under pretence of presenting a petition, made two thrusts at his breast

with a knife, both of which fortunately failed. His majesty with great temper exclaimed,—“I am not hurt—Take care of the poor woman—Do not hurt her.”

(122.) ENGLAND, HISTORY OF.—COMMERCIAL TREATY WITH FRANCE. PARLIAMENTARY PROCEEDINGS IN 1787. On the 26th Sept. 1786, the treaty of commerce and navigation, between France and Great Britain was signed at Versailles. This treaty was extremely popular. It was not only very advantageous to Britain, but seemed to be the fruits of a triumph of liberal sentiments and enlarged views, over ancient prejudices and mercantile jealousy. Its general principle was, to permit the mutual exchange of every species of commodity, except warlike stores. It promised to render two of the most civilized nations in the world mutually useful to each other; and thus to strike off, from the number of probabilities, whatever might involve them in future wars. It was recommended to the sanction of parliament in his majesty's speech, at their meeting on the 24th Jan. 1787. But, in the debate on the address, and on the 13th Feb. (the day appointed for taking the treaty into consideration,) it was censured by opposition, both as to its commercial and political tendency. French principles were held forth as dangerous to British liberty. Mr Francis argued, “that the nearer the two nations were drawn into contact, the more they mingled with each other, the more the morals and principles of the English would be corrupted. He, whose purpose was to enslave a free people, always began by corrupting them. An alliance between a despotic and a limited monarchy, the experience of England ought to deter us from. Nations which bordered on each other could never thoroughly agree,” &c. Mr Fox also argued at great length against the treaty:—“that France was the inveterate and unalterable enemy of Britain; that the incessant object of her ambition was universal monarchy, and from us alone she feared to be traversed in her pursuit.” Mr Pitt said, “his mind revolted from the supposition, that any nation could be unalterably the enemy of another.” It had no foundation in history or experience. It was a libel on political society, and supposed the existence of diabolical malice in our original frame. In a commercial view, this treaty would enrich this nation. It would be advantageous to France, but more so to us. She gained for her wines, &c. a great and opulent market; we did the same to a much greater degree. She procured a market of 8 millions of people; we one of 24 millions. France gained this market for her produce which employed few hands: for our manufactures which employed many hundred thousands. France could not add above 100,000l. to her revenue by it. England would gain a million.” But our limits permit us not to do justice to the arguments on either side, on this important subject. Mr Pitt's resolutions, approving of the different articles in the treaty, were all successively carried by large majorities in both houses. He soon after moved to lower the duties on Portuguese, Spanish, and Madeira wines, one 3d below those on French wines, which was agreed to. On the 16th Feb. he moved several

resolutions on the consolidation of the customs which were so obviously advantageous, that they were agreed to with hardly any debate. Mr Burke, instead of opposing the measure, returned thanks to Mr Pitt as the author of it. On the 17th May, Mr Dundas opened what he called the *budget of India* upon which he moved several resolutions on the state of our revenues there, which, after some opposition, were passed without division. On the 26th April, Mr Pitt introduced a bill for farming the tax on post horses, as a remedy for the frauds committed in that branch of revenue. This mode of collection was regarded as unconstitutional, by opposition, but after a warm debate, was carried by 162 to 95. Previous to this decision, Mr Fox moved a repeal of the shop tax; which after some debate, was rejected by 183 to 147. A bill for amending the laws respecting lotteries was introduced by ministry, and passed the house of commons; having been amended by the lords, was thrown out by the commons; and a new bill introduced, which passed both houses. Lord Rawdon called the attention of the house of lords to the connection with Spain, and moved a resolution disapproving of it. He said, that “we certainly might have made a better bargain, than to yield a tract of land as large as Portugal, which produced cotton, indigo, logwood, and sugar, for a tract of 12 miles, and the liberty to cut logwood at Honduras Bay. It was an act of ingratitude, too, he said, to deliver up the inhabitants of the Musquito shore to their old implacable enemy. Lord Carnarvon and the D. of Richmond opposed the resolution which was defended by lord Stormont, but rejected by 53 to 17. Two constitutional questions respecting the Scots peerages, were brought before the lords during this session. The 1st was a motion by lord V. Stormont, that the E. of Abercorn and D. of Queensberry, who had been chosen of the number of the 16 peers, having been created peers of Great Britain, thereby ceased to sit as representatives of the peerage of Scotland. This motion was supported by the Bp. of London, the earls of Hopeton and Fauconberg; and opposed by lord Morton, but passed by 32 to 14. The 2d question arose from the election of the E. of Selkirk and lord Kinnaird, in the room of Queensberry and Abercorn; wherein the dukes of Queensberry and Gordon had voted contrary to the resolution of 1709. Lord Hopeton therefore moved on the 18th May, “That a copy of that resolution should be transmitted to the lord register of Scotland, as a rule for his future proceedings in elections.” which was opposed by the D. of Richmond, lords Thurlow, Morton, and Sydney; but supported by lords Kinnaird, Stormont, and Carmarthen; and carried by 51 to 35. East India affairs again came under the review of parliament. Mr Dempster presented a petition from the British inhabitants of Fort William in Bengal, complaining of Mr Pitt's act, in 1784: (p. 124.) the committee on the petition being dissolved before it was considered, Mr Dempster moved an amendment of the act, in several points, particularly as to the restoration of trial by jury: which was negatived by 128 to 21. Mr Dempster brought forward another motion for “copies of

order issued by the Board of Control, forbidding the company's servants in India, to correspond with their friends at home on India affairs," which was also rejected by 94 to 20. The question respecting the hardships protestant dissenters suffered under by the TEST ACT, was introduced by Mr Beaufort on the 28th March, and ended with great strength of reasoning. One incredible argument he drew from "the hardship it posed on conscientious ministers of the church of England itself. By the positive precepts of its religion, they were enjoined to warn from a sacred table all blasphemers, and persons of a dissolute life; yet to these very persons, if they named it as a qualification, they were commanded by the test act to administer the sacrament. There were any thing serious in religion, if the stripes of the church of England were not a mere mockery of the human understanding, if to the loss of peace of mind here, and of eternal consequences hereafter, were not the idle babblings of verbiage, no pretext of state policy could justify this enormous profanation, this monstrous attempt, as irrational as impious, to strengthen the arch of England by debasing the church of Christ." The motion was supported by Mr Fox, lord Auchamp, Sir James Johnston, Sir Harry Hougham, and Mr Smith, but opposed by lord North, Mr Pitt, and Sir W. Dolben; and rejected by 8 to 100.—The English law has long been discredited by its severity to unfortunate debtors. Imprisonment for an unlimited period has been the practice since the reign of Charles II. Repeated attempts to ameliorate its effects by acts of insolvency, have been made, but as often defeated by the influence of lord Thurlow in the upper house; so has on various occasions caused the bills passed by the commons for that humane purpose to be thrown out. On the 22d May, a bill to that effect was read the 2d time in the house of lords, and supported by the D. of Norfolk; who stated that there were 3000 debtors confined in the different prisons, the loss of whose labour was an injury to the public, as well as to their families. The bill was also supported by lord Kinnaid and Mr E. of Hopeton, but the rhetoric of lord Thurlow led the house again to reject it by 23 to 12. Subjects of superior importance about this time occupied the attention of the lower house. On the 14th April, Mr Ald. Newnham had announced a motion he intended to make on the 4th of May, on an address to the king, respecting the prince of Wales's situation; who 9 months before, had unnecessarily reduced his household, and entered upon a plan of economy for the liquidation of his debts. This occasioned several delicate and interesting conversations in the house, but on the 17th appointed, the intended motion was not made, on account of an interview between the prince and Mr Dundas; in consequence of which, the majesty sent a message to the house on the 18th, informing them, that he had ordered 10,000l. to be paid out of the civil list, in addition to the prince's former allowance. On the Wednesday following, the house voted an address to the king, requesting him to order 161,000l. to be paid out of the civil list, in full, for the prince's debts; and 100,000l. more to complete the works at Carlton

house.—On the 15th May, Mr Charles Grey introduced an inquiry into certain abuses in the Post Office, particularly the dismissal of E. Tankerville from the office of post-master general, merely because he had pointed out these abuses. A committee of inquiry being appointed, their report confirmed Mr Grey's statement of abuses: but, after a pretty warm debate on the 28th, the business was got rid of, by a motion of adjournment to that day 3 months. The only other important business before the house this session was, the impeachment of W. Hastings, Esq. which commenced on the 7th Feb. when Mr Sheridan opened the 3d charge, respecting his treatment of the begums of Oude, (§ 117.) in a speech of 5½ hours long; which, in the opinions of those who heard it, surpassed all the eloquence of ancient and modern times. Conviction followed upon his arguments, and from that moment the whole house, except such members as were connected with the governor by friendship or gratitude, persevered in supporting the impeachment. He showed, that "in plundering these aged princesses, Mr Hastings had no pretence, no excuse, nothing but his own corrupt will, to plead for his conduct." He expatiated on "his still more atrocious conduct in instigating a son against his mother, and sacrificing female dignity and distress, to parricide and plunder."—"The treaty of Chunar might challenge all the treaties that ever existed, for containing in the smallest compass the most extensive treachery. Mr Hastings did not consent to it till he had received a bribe of 100,000l. from the nabob." Of Mr Hastings's government he drew the following picture: "Alike in the military and political line, we might see auctioneering ambassadors and trading generals: We saw a revolution brought about by an affidavit; an army employed in executing an arrest; a town besieged on a note of hand; and a prince dethroned for the balance of an account. Thus a government was exhibited, unting the mock majesty of a bloody sceptre, with the little traffic of a merchant's counting house; wielding a truncheon with one hand, and picking a pocket with the other." Mr Pitt expatiated largely on many aggravating circumstances in Mr Hastings's conduct, particularly in making the nabob the instrument of robbing his mother. The charge was carried by 175 against 68. On the 2d March, Mr Pelham opened the charge, as to the nabob of Furruckabad; which, after some debate, was carried by 112 to 50. On the 15th the charge on contracts, &c. was opened by Sir James Erskine, which was voted by 96 to 37. On the 2d April, Mr Sheridan again displayed his rhetorical powers, by opening the charge on presents:—"In reviewing the governor's conduct, (he said,) he had found it to spring from a wild, irregular and excentric mind. He had been every thing by fits and starts; now proud and lofty, now mean and insidious; now generous, now griping; now artful, now open; now temporising, now decided; in pride, in passion, in every thing changeable, except in corruption. In corruption alone, he had proved uniform, systematic and methodical. His revenge was a tempest, a tornado, blackening in gusts of pride the horizon of his dominion, and occasionally carrying all before

before it. But his corruption was a regular trade wind, which always blew from the same point, and on which the circulation of the wealth of India depended." Major Scott and Mr Burges vindicated Mr Hastings; but the charge was sustained by 165 to 54. On the 19th April, the charge as to the revenues was opened by Mr Francis, and sustained by 71 votes against 55. The report of the charges was brought up by Mr Burke, and supported by Mr Pitt, Mr Martin, and Sir Ph. J. Clerke, but opposed by lords Hood and Mulgrave, Mr N. Smith, Mr Wilkes, Major Scott, and Mr Sumner. Mr N. Smith spoke at great length in Mr Hastings's favour; but the report was approved by 175 against 89; and the next day, Mr Burke was ordered, "in the name of the house, and of all the commons of Great Britain, to go to the bar of the house of lords, and impeach Mr Hastings of high crimes and misdemeanours," &c. which was instantly done; and on the 14th May, the articles were sent to the house of lords, and an impeachment moved on the 16th article, by Mr Burke. Mr Hastings was taken into the custody of the Black Rod, but admitted to bail in 10,000*l.* and two securities in 5,000*l.* each. On the 30th May, the session was closed. On the 1st of June, his majesty issued a proclamation for encouraging piety and virtue, and preventing and punishing vice, profaneness, and immorality. In autumn 1787, the dissensions in Holland having risen to such a height as to occasion the interference of the K. of Prussia in favour of the Stadtholder, and an armament on the part of France in favour of the insurgents, the British court not only ordered an augmentation of forces, but concluded a treaty with the prince of Hesse-Cassel, on the 28th Sept. whereby he engaged to furnish Britain with 12,000 men at 4 weeks notice, for which he was to receive a subsidy of 36,000*l.* a-year. But the democratic party in Holland being soon defeated, the armaments of Britain and France were disbanded by mutual consent on the 27th Oct. In consequence of these transactions, the parliament assembled earlier than usual, viz. on the 27th Nov. when his majesty explained his intention of counteracting all forcible interference on the part of France, in consequence whereof, an amicable explanation had taken place between the two courts. In the house of peers, the Bp. of Landaff, and lord Stormont approved of the address, though the latter ascribed "the fortunate issue of the business, less to the merits of ministry, than to the embarrassed situation of France," on which he enlarged; and expressed his hope, "that the spirit of liberty, which had lately appeared, might become general." The measures taken to counteract the interference of France were also approved by all parties in the house of commons, though some remarks were made by Mr Fox on the subsidiary treaty with Hesse, as countenancing the introduction of foreign troops. The subsidy however was voted *non*. On the 10th Dec. a motion by the secretary at war for the augmentation of the military establishment, for the defence of our W. India islands, occasioned a warm debate, but was carried by 248 against 80.

(129.) ENGLAND, HISTORY OF.—PARLIAMENTARY PROCEEDINGS IN 1788.—SCOTS DISTILLERIES:—INDIA DECLARATORY ACT:—IMPEACHMENT OF SIR E. IMPEY:—SLAVE TRADE:—KING'S INDISPOSITION, &c. Parliament ad on the 31st Jan. and on the 5th Feb. after reading a petition from the London corn distillers, Mr Pitt moved an additional duty of 6*d.* per gallon to be laid upon Scots spirits; which, though objected to by several Scots members, as partial and unjust, and even styled "*a robbery*" by Sir J. Johnstone, was agreed to; with the exemption only of spirits shipped before Feb. 1st. On the 9th, petitions for reform were presented by lord Mansfield and Mr Sheridan, from 43 royal boroughs of Scotland. During the alarm respecting the affairs of Holland, (§ 128.) Mr Pitt had proposed to the E. India directors to send out 4 regiments of the king's troops, at the expence of the company, which they had agreed to; but, on the 25th Feb. moved a declaratory bill, "*to remove doubts respecting the power of the commissioners on India affairs.*" On the 2d reading, Mr Erskine reprobated its tendency, and drew a striking contrast between the India bills of Mr Fox and Mr Pitt. (§ 127, 128.) The latter, he said, "*had stolen every thing that the former demanded; and while it presented the company with the trappings of sovereignty, reduced them to the condition of slaves.*" The bill, however, after repeated violent debates, passed both houses. A protest was entered against it by 15 peers, among whom was lord Hay, E. of Kinnoull.—While the prosecution against Mr Hastings was going on before the house of lords, and Messrs Burke, Fox, Sheridan, Grey, and Anstruther, were exerting all their oratorical powers on the charges against him, an impeachment was moved in the house of commons by Sir Gilb. Elliot, against Sir Elijah Impey. Of the 6 charges exhibited against him, the only one discussed before the house was, that for the murder of the rajah Nundcomar, a chief of the Bramins. On the 28th April, Sir Gilbert entered fully on the charge; and showed, that forgery, the pretended crime for which Nundcomar was executed, was not capital in India; that the English law had never been promulgated among the Hindoos; that it did not even extend across the Tweed; and therefore, it was as absurd and unjust to apply it to a Hindoo, as it would be to try the great Mogul for bigamy. Mr Fox said, "It was not for forgery, that Nundcomar was hanged. It was because he made an accusation against Mr Hastings."—"If, (added he,) I were upon oath as a juror, I would pronounce Sir Elijah guilty of a deliberate murder." Col. Fullarton said, upon the charges in general, "that the decisions of Sir E. Impey had alienated the minds of Europeans, Mussulmans and Hindoos; had excited the emotions of 12 millions of the natives, and spread such terror and dismay through all Bengal, as appeared more dreadful to them than war, pestilence or famine." He quoted instances of "rapes, tumults, homicides, and sacrilege," all of which he "ascribed to the baleful influence of Sir E. Impey."

" Messrs Pitt, McDonald, Arden, and Sir Sutton, defended Impey; and Messrs Burke, Anson, and Sir J. Johnstone supported the impeachment: which however was negatived by 73 to 55. The 2d charge, being now before the privy council, was deemed improper to be entered as a circumstance, which Messrs Burke and Anson considered as a *collusion* between Sir Eliot and the company. The prosecution was therefore postponed for 3 months. A great number of petitions having been presented against the slave trade, in the beginning of the session, Mr Wilberforce gave notice of his intention to bring a bill on the subject; but being prevented by opposition, Mr Pitt, on the 9th May, moved a resolution, "That they would early in the next session take into consideration the state of the slave trade. Mr Fox said, that "the slave trade ought not to be regulated, but destroyed, as notoriously hostile to justice and humanity." Mr Fox's motion was agreed to, *mem. con.* Sir W. Wilberforce mentioned the miserable situation of the negroes during their transportation from Africa, a circumstance requiring an immediate remedy, and soon after moved for a bill to regulate the business. Petitions were presented against it from the merchants of London and Liverpool, and witnesses examined. Mr Beaumont showed in the proof led, that 34 persons perished, for that would have died naturally. Mr Pitt displayed a laudable feeling for the shocking facts disclosed at the bar; and said, "if the trade could be carried on in no other way, he would: for its utter annihilation; as a trade shocking to humanity to hear related, abominable to be carried on by any people, and which reflected the greatest dishonour on the British senate and on the nation."—"He hoped the house would extricate itself from the guilt and remorse, which every man ought to feel, for having so long suffered the cruelties to be inflicted on human beings by its subjects." On the 18th June, the bill was carried up to the house of lords; where it was opposed, and at last rejected on a point of illegality. Another exactly similar was immediately introduced, but, from an error in its structure, the same process was obliged to be repeated.

The session was closed on the 11th July. Towards the end of the year, a circumstance occurred which alarmed the whole nation. On the 1st Oct. his majesty was taken ill, and on the 10th, symptoms of derangement appeared, with an intermission, till the 12th Feb. 1789, when he was declared by Dr Willis to be in a state of pressing amendment. On the 17th he was pronounced convalescent, and on the 25th, free from complaint; which occasioned a universal rejoicing throughout the three kingdoms.

(130.) ENGLAND, HISTORY OF,—FROM FEB. 1790, TO THE END OF 1792. During the king's illness, little public business was done, parliament being chiefly occupied in consulting precedents, and debating about settling the regency. (See REGENCY.) The two houses continued to sit by adjournments till the 10th of March; when the chancellor addressed them in name of his majesty; and the usual business commenced. The chancellor in his speech informed the house of the

treaty concluded with Prussia. The supplies being voted, Mr Fox moved the repeal of the shop tax, which Mr Pitt at last agreed to. On the 8th May, Mr Beaumont's motion for the repeal of the test act, and 2 similar bills introduced by E. Stanhope, were rejected. A bill to commemorate the revolution of 1688, by an annual festival, after passing the house of commons, was rejected by the lords. The report of the privy council on the slave trade was laid on the table on the 25th April, by Mr Pitt, and on the 12th May, Mr Wilberforce opened the discussion in a speech which has been universally admired. As the substance of it, and the chief arguments on both sides, will be found under the article SLAVE TRADE, we shall only mention here, that on the 23d June, the farther consideration of this important subject was deferred till next session; and in the meantime, Sir W. Dolben's act, (§ 129.) was renewed. The session of 1790 met Jan. 21. The three chief subjects that came before it were the test act, parliamentary reform, and the abolition of the slave trade. The first was rejected by 204 to 105. The 2d was introduced by Mr Flood, but, after a warm debate, withdrawn. The last was early revived by Mr Wilberforce; the examination of witnesses upon it was concluded, and Sir W. Dolben's bill renewed on the 23d April, by 95 to 69. This session had the merit of abolishing the barbarous punishment of burning women for coining shillings. The trial of Mr Hastings went slowly forward. The contest with Spain about NOOTKA SOUND, (see that article,) occasioned an armament to be voted; and parliament was dissolved on the 11th of June. The principal business before the new parliament, which met Nov. 25th, respected the Spanish convention; the trial of Mr Hastings, which both houses voted to be still depending, notwithstanding the dissolution; the Indian war; the slave trade bill, which was negatived by a majority of 75; the bill for relief of protesting Catholics, which passed; the bill on the rights of JURIES, which was postponed; the QUEBEC bill; the dispute with RUSSIA, on which an armament was voted; and the bill for repealing the test act, which was rejected. The session was closed on the 10th June 1791; and the nation was soon after disgraced by the riots at BIRMINGHAM. See RIOT. Parliament met on Jan. 31, 1792. Its chief business was upon the Russian armament; the treaty with Prussia; the slave trade, which was fixed to cease on the 1st Jan. 1796; the Scots reform bill, which was rejected; the society of the friends of the people; the proclamation against seditious writings; the Birmingham riots; the dissenter's bill, which was rejected by 79; the libel bill, which was postponed; and E. India finances. On the 26th Dec. the alien bill was passed, and on the 28th his majesty informed parliament, that he had dismissed the French ambassador. As this paved the way for the commencement of the present war, which has no appearance of being soon ended, we shall refer the reader for the history of the subsequent events to the article WAR.

(131.) ENGLAND, LAKES OF. These are chiefly in the NW. counties; and those of Westmoreland and Cumberland, in particular, exhibit such

such varieties of beautifully romantic and picturesque scenery, as to have become, for some years past, the fashionable object of summer excursions from the metropolis.

(132.) ENGLAND, MANUFACTURES AND TRADE OF. These are so vast, extensive, and various, that an account of them would lead us beyond our limits. Referring, therefore, to the various counties, &c. we need only observe here, that in the woollen, cotton, and hardware manufactures, this country has long maintained a pre-eminence; and we may add, that the manufacture, if it may be so called, of our home-made wines, in imitation of all the varieties of the foreign, has been brought to an uncommon degree of perfection.

(133.) ENGLAND, MOUNTAINS OF. The chief mountains in England are the hills of Westmoreland, the Malvern hills in Worcester, the Peak of Derby, Snowdon, and Penllynion.

(134.) ENGLAND, POPULATION OF. The inhabitants of England and Wales are computed at seven millions.

(135.) ENGLAND, PORTS OF. The chief ports of the navy are, Portsmouth, Plymouth, Deptford and Chatham.

(136.) ENGLAND, PRODUCE OF. All the most valuable productions, both animal and vegetable, of this country, have been imported from the continent. Originally nuts, acorns, crabs, and a few wild berries, were almost all the variety of vegetable food which our woods could boast. To foreign countries, and to the efforts of culture, we are indebted for bread, the roots and greens of our tables, and all our garden fruits. The barley and hops of our malt liquors, and apples for cider, are equally the gifts of other lands. The meanest labourer is now fed with more wholesome and delicate aliments, than the ancient petty kings of the country could obtain in its savage and uncultivated state.

(137.) ENGLAND, QUADRUPEDS OF. Originally this great island seems to have been like the wilds of America, almost entirely over-run with wood. Here formerly roamed the bear, the wolf, and the wild boar, now totally extirpated. Large herds of stags ranged through the woods, roebucks bounded over the hills, and wild bulls grazed in the marshy pastures. By degrees the woods were destroyed, to make way for cultivation; the marshes were drained; and the wild animals, invaded in their retreats, gradually disappeared. England now possesses no other wild beasts but the fox, the wild cat, the badger, the martin, and others of the weasel kind; the otter, the hedgehog, the hare and rabbit; the squirrel, dormouse, mole, &c. and several other species of the rat and mouse. On the other hand, every kind of domestic animal, imported from abroad, has been reared to the greatest degree of perfection. The horse has been trained up so as to excel in strength and swiftness the same animal in every other country. The horned cattle have been brought to the largest size and greatest justness of shape. The different races of sheep, in England, are variously distinguished, either for uncommon size, goodness of flesh, and plenty or fineness of wool. The deer, which were originally a foreign breed, are superior in beauty of skin, and delicacy of flesh, to those

of most countries. Even the several kinds of dog have been trained to degrees of courage, strength, and sagacity, rarely to be met with elsewhere.

(138.) ENGLAND, RELIGION OF. The established religion of England is the reformed, and no doctrines, as contained in the 39 articles, differ in little or nothing from those of the church of Scotland, though the English clergy by no means adhere strictly to these. The late celebrated B. of Chatham said of the church of England, "We have a popish liturgy, a Calvinistic creed, and an Arminian clergy." It is one of the blessings of the British constitution, that all religions are tolerated in England, in consequence of which, people of all principles and professions are to be found in it. The only drawback is the TEST ACT, which, to the disgrace of the present liberal age, still excludes conscientious people of all professions from civil offices. This is the more illiberal, the no restriction of this kind takes place in Scotland.

(139.) ENGLAND, RIVERS AND FISHERIES. The rivers are numerous; but the comparative small extent of England will not allow them to vie, in length of course, with the great rivers of the continent. The most considerable of them are the Thames, Severn, Medway, Trent, Ouse, Tyne, Tees, Eden, Avon, Derwent, Dee, Mersey, &c. which, with many others, will be best described under their respective heads. The rivers and seas of England are stocked with a great variety of fish, which yield a plentiful article of provision to all ranks of people. The river fish, from the populousness of the country, and the number of fishers, are, in many parts much diminished. But the sea is an inexhaustible source; and the whole sea-coast is enlivened by numerous inhabitants, who gain their chief subsistence from it.

(140.) ENGLAND, SURFACE AND SOIL OF. "The face of the country in England," says Dr. Aikin, in his *England Delineated*, "affords all the beautiful variety which can be found in the most extensive tracts of the globe. In some parts, verdant plains extend as far as the eye can reach, watered by copious streams, and covered by a numerous cattle. In others, the pleasing varieties of gently rising hills and bending vales fertile in corn, waving with wood, and interspersed with meadows, offer the most delightful landscapes of rural opulence and beauty. Some tracts abound with prospects of a more romantic kind; lofty mountains, craggy rocks, deep narrow dells, and rumbling torrents. Nor are there wanting, as a contrast to so many agreeable scenes, the gloomy features of black barren moors and wide uncultivated heaths. On the whole, however, few countries have a smaller proportion of land absolutely sterile and incapable of culture." The richest parts are, in general, the middle and southern. Towards the N. it is less fertile. The E. coast is in many parts, sandy and marshy. A range of rude and elevated land, sometimes rising into lofty mountains, extends from the borders of Scotland to the very heart of England, running from N. to S. and forming a natural division between the E. and W. sides of the kingdom. Cornwall is also a rough hilly tract; as well as part of the adjacent counties. These mountainous tracts are bound with various mineral treasures.

REV.

[II.] ENGLAND; NEW. See NEW ENGLAND. ENGLECERY, or } *n. f.* [in old records.] ENGLECHERY, } The state or privilege of Englishman.

ENGLESQUEVILLE, a town of France, in the pt. of the Lower Seine, 15 miles SW. of Arques.

1.) * ENGLISH. *adj.* [*engles*, Saxon] Belonging to England; thence English is the language of England.—He hath neither Latin, French, nor Italian; and you may come into the court, and say that I have a poor pennyworth in the *English*. *Shakespeare's Merchant of Venice*.—Of *English*, the coarser sort is called plaister, or par; the finer, spoad. *Woodward*.

2.) ENGLISH, *n. f.* The people of England. The word is often improperly used for *British*, a word which, now that the two kingdoms have

been nearly a century united, ought, agreeably to the articles of Union, to have long ago superseded the use of the local epithet, *English*, when speaking of the people of Great Britain, or of its dominions, legislature, government, ambassadors, ministry, forces, revenues, or the like.

* To ENGLISH. *vi. a.* [from the noun.] To translate into English.—The hollow instrument terebra, we may *english* piercer. *Bacon*.—We find not a word in the text can properly be rendered anise, which is what the Latins call anethum, and is properly *englished* dill. *Brown's Vulgar Errors*.

ENGLISH COVE, a bay on the coast of New Ireland, 4 miles from Cape St George.

ENGLISH HARBOUR, one of the best harbours in Antigua, 1 mile SE. of Falmouth. Lon. 61° 27' 30" W. Lat. 17° 8' 25" N.

ENGLISH LANGUAGE.

UNDER this article, we are persuaded we cannot give a more accurate treatise upon the ENGLISH LANGUAGE and ENGLISH GRAMMAR, perform a more acceptable service to the philosophical reader, than by fulfilling our promise of writing *verbatim* Dr JOHNSON'S much admired citations upon these subjects, contained in, and accompanying, his preface to the Folio Edition of his *Dictionary of the English Language*. These the more necessary to be inserted somewhere in his work, that his DICTIONARY forms a consistent part of it; and we apprehend that we did no where introduce them with more propriety, than under the present article.

From Dr JOHNSON'S *History*, however, of the *English Language*, which is also prefixed to the 10th Edition of his Dictionary, we think it necessary only to insert a few extracts; the greater part of it, wherein he gives specimens of its gradual formation from the Saxon, being not only intelligible, but actually illegible, by the majority of modern English readers, as it is inserted in original Saxon characters.

PREFACE TO THE FOLIO EDITION OF DR JOHNSON'S DICTIONARY OF THE ENGLISH LANGUAGE.

is the fate of those who toil at the lower employments of life, to be driven rather by the fear of evil, than attracted by the prospect of good; exposed to censure, without hope of praise; disgraced by miscarriage, or punished for loss, where success would have been without loss, and diligence without reward.

Among these unhappy mortals is the writer of dictionaries; whom mankind have considered, as the pupil, but the slave of science, the sinner of literature, doomed only to remove rubbish and clear obstructions from the paths through which Learning and Genius press forward to conquest and glory, without bestowing a smile on humble drudge that facilitates their progress. Every other author may aspire to praise; the lexicographer can only hope to escape reproach, and
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even this negative recompense has been granted to very few.

I have, notwithstanding this discouragement, attempted a Dictionary of the *English* language, which, while it was employed in the cultivation of every species of literature, has itself been hitherto neglected; suffered to spread, under the direction of chance, into wild exuberance; resigned to the tyranny of time and fashion; and exposed to the corruptions of ignorance, and caprices of innovation.

When I took the first survey of my undertaking, I found our speech copious without order, and energetic without rules; wherever I turned my view, there was perplexity to be disentangled, and confusion to be regulated; choice was to be made out of boundless variety, without any established principle of selection; adulterations were to be detected, without a settled test of purity; and modes of expression to be rejected or received, without the suffrages of any writers of classical reputation or acknowledged authority.

Having therefore no assistance but from general grammar, I applied myself to the perusal of our writers; and noting whatever might be of use to ascertain or illustrate any word or phrase, accumulated in time the materials of a dictionary, which, by degrees, I reduced to method, establishing to myself, in the progress of the work, such rules as experience and analogy suggested to me; experience, which practice and observation were continually increasing; and analogy, which, though in some words obscure, was evident in others.

In adjusting the ORTHOGRAPHY, which has been to this time unsettled and fortuitous, I found it necessary to distinguish those irregularities that are inherent in our tongue, and perhaps coeval with it, from others which the ignorance or negligence of later writers has produced. Every language has its anomalies, which, though inconvenient, and in themselves once unnecessary, must be tolerated among the imperfections of human things, and which require only to be registered,

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language; and I have therefore inserted *Dutch* or *German* substitutes, which I consider not as radical but parallel, not as the parents, but sisters of the *English*.

The words which are represented as thus related by descent or cognation, do not always agree in sense; for it is incident to words, as to their authors, to degenerate from such ancestors, and to change their manners when they change their country. It is sufficient, in etymological enquiries, if the senses of kindred words be found such as may easily pass into each other, or such as may both be referred to one general idea.

The etymology, so far as it is yet known, was easily found in the volumes where it is particularly and professedly delivered; and, by proper attention to the rules of derivation, the orthography was soon adjusted. But to collect the words of our language was a task of greater difficulty; the deficiency of dictionaries was immediately apparent; and when they were exhausted, what was yet wanting, must be sought by fortuitous and unguided excursions into books, and gleaned as industry should find, or chance should offer it, in the boundless chaos of a living speech. My search, however, has been either skilful or lucky; for I have much augmented the vocabulary.

As my design was a dictionary, common or appellative, I have omitted all words which have relation to proper names; such as *Arian*, *Socinian*, *Calvinist*, *Benedictine*, *Mahometan*; but have retained those of a more general nature, as *Heathen*, *Pagan*.

Of the terms of art I have received such as could be found either in books of science or technical dictionaries; and have often inserted, from philosophical writers, words which are supported perhaps only by a single authority, and which being not admitted into general use, stand yet as candidates or probationers, and must depend for their adoption on the suffrage of saturation.

The words which our authors have introduced by their knowledge of foreign languages, or ignorance of their own, by vanity or wantonness, by compliance with fashion or lust of innovation, I have registered as they occurred, though commonly only to censure them, and warn others against the folly of naturalizing useless foreigners to the injury of the natives.

I have not rejected any by design, merely because they were unnecessary or exuberant; but have received those which by different writers have been differently formed, as *wisid*, and *wisidity*, *visious*, and *visosity*.

Compounded or double words I have seldom noted, except when they obtain a signification different from that which the components have in their simple state. Thus *high-wayman*, *woodman*,

and *horsecourser*, require an explanation; but *thieflike* or *coachdriver* no notice was needed, because the primitives contain the meaning of the compounds.

Words arbitrarily formed by a constant and settled analogy, like diminutive adjectives in *-ish*, as *greenish*, *bluish*, adverbs in *-ly*, as *daily*, *openly*; instantives in *-ness*, as *vileness*, *faultiness*, were so diligently sought, and sometimes have been noted, when I had no authority that invited me to insert them; not that they are not genuine or regular offsprings of *English* roots, but because their relation to the primitive being always the same, their signification cannot be mistaken.

The verbal nouns in *-ing*, such as the *breeding* the *castle*, the *leading* of the *army*, are acknowledged, or placed only to illustrate the sense of the verb, except when they signify things as actions, and have therefore a plural number, as *dwelling*, *living*; or have an absolute and distinct signification, as *colouring*, *painting*, *learning*.

The participles are likewise omitted, unless signifying rather habit or quality than action, they take the nature of adjectives; as a *thinking* man, a man of prudence; a *pacing* horse, a *homing* can pace: these I have ventured to call *participial adjectives*. But neither are these always noted, because they are commonly to be understood without any danger of mistake, by consulting the verb.

Obsolete words are admitted, when they are found in authors not obsolete, or when they are any force or beauty that may deserve revival.

As composition is one of the chief characteristics of a language, I have endeavoured to give some reparation for the universal negligence of predecessors, by inserting great numbers of compounded words, as may be found under *before*, *new*, *night*, *fair*, and many more. Their numerous as they are, might be multiplied, but that use and curiosity are here satisfied, and the frame of our language and modes of our conversation amply discovered.

Of some forms of composition, such as that in which *re* is prefixed to note repetition, and which signify *contrariety* or *privation*, all the examples cannot be accumulated, because the use of such particles, if not wholly arbitrary, is so little needed, that they are hourly affixed to new words as occasion requires, or is imagined to require them.

There is another kind of composition more frequent in our language than perhaps in any other, from which arises to foreigners the greatest difficulty. We modify the signification of many words by a particle subjoined; as to *come off*, to *come by* a fetch; to *fall on*, to attack; to *fall off*, to apostatize; to *break off*, to stop abruptly; to *go out*, to justify; to *fall in*, to comply; to *go on*, to

lus, locus in plano editor. Hom. II. b. v. §11. ἵσι δὲ τίς προσερχομένη πάλιν αἰσίου κελουε. Ubi ante brevis scholiorum κελουε exp. τὸ ἵσι δὲ αἰσίου προσερχομένη πάλιν.

NAP, to take a nap. Dormire, condormiscere. Cym. heppian. A. S. hnæppan. Quod potest videri potest desumptum ex αἰσίου, obscuritas, tenebræ: nihil enim æque solet conciliare somnum quam caliginosa profundæ notis obscuritas.

STAMMER, Balbus, blæsus Goth. STAMMS. A. S. stamer, stamur. D. stam. B. stamder. Stamma. It. stamr. Sunt a σταμαίνω vel σταμάλω, nimia loquacitate alios offendere; quod improbitus quentes libentissime garrere solent; vel quod aliis nimis semper videantur, etiam parvissime loquentes.

ease; to *set off*, to embellish; to *set in*, to begin a continual tenour; to *set out*, to begin a rse or journey; to *take off*, to copy; with innumerable expressions of the same kind, of which appear wildly irregular, being so far distant in the sense of the simple words, that no sagacious will be able to trace the steps by which they led at the present use. These I have noted with great care; and though I cannot flatter myself that the collection is complete, I believe I am so far assisted the students of our language; this kind of phraseology will be no longer innumerable; and the combinations of verbs and tenses, by chance omitted, will be easily examined by comparison with those that may be found.

Many words yet stand supported only by the name of *Bailey*, *Swiftoth*, *Philips*, or the confused *Dict.* for *Dictionaries* subjoined; of these I am not always certain that they are read in any book but the works of lexicographers. Of such have omitted many, because I had never read them; and many I have inserted, because they perhaps exist, though they have escaped my notice: they are, however, to be yet considered resting only upon the credit of former dictionaries. Others, which I considered as useful, or now to be proper, though I could not at present support them by authorities, I have suffered to stand upon my own attestation, claiming the same privilege with my predecessors, of being sometimes credited without proof.

The words, thus selected and disposed, are immutably considered; they are referred to different parts of speech; traced, when they are irregularly inflected, through their various terminations; and illustrated by observations, not indeed of great or striking importance, separately considered, but necessary to the elucidation of our language, and hitherto neglected or forgotten by English grammarians.

That part of my work on which I expect mankind most frequently to fasten, is the *Explanation*; in which I cannot hope to satisfy those, who are perhaps not inclined to be pleased, since I have not always been able to satisfy myself. To interpret a language by itself is very difficult; any words cannot be explained by synonyms, because the idea signified by them has not more than one appellation; nor by paraphrase, because simple ideas cannot be described. When the nature of things is unknown, or the notion unsettled and indefinite, and various in various minds, the words by which such notions are conveyed, or the things denoted, will be ambiguous and perplexed. And such is the fate of hapless lexicography, that not only darkness, but light, immoderate and distresses it; things may be not only too little, but too much known, to be happily illustrated. To explain, requires the use of terms as abstruse than that which is to be explained, and such terms cannot always be found; for nothing can be proved but by supposing something intuitively known, and evident without proof, so nothing can be defined but by the use of words too plain to admit a definition.

Other words there are, of which the sense is so subtle and evanescent to be fixed in a para-

phrase; such are all those which are by the grammarians termed *expetives*, and, in dead languages, are suffered to pass for empty sound, of no other use than to fill a verse, or to modulate a period, but which are easily perceived in living tongues to have power and emphasis, though it be sometimes such as no other form of expression can convey.

My labour has likewise been much increased by a class of verbs too frequent in the *English* language, of which the signification is so loose and general, the use so vague and indeterminate, and the senses detorted so widely from the first idea, that it is hard to trace them through the maze of variation, to catch them on the brink of utter inanity, to circumscribe them by any limitations, or interpret them by any words of distinct and settled meaning; such are *bear*, *break*, *come*, *cast*, *fall*, *get*, *give*, *do*, *put*, *set*, *go*, *run*, *make*, *take*, *turn*, *throw*. If of these the whole power is not accurately delivered, it must be remembered, that while our language is yet living, and variable by the caprice of every one that speaks it, these words are hourly shifting their relations, and can no more be ascertained in a dictionary, than a grove, in the agitation of a storm, can be accurately delineated from its picture in the water.

The particles are among all nations applied with so great latitude, that they are not easily reducible under any regular scheme of explication: this difficulty is not less, nor perhaps greater, in *English*, than in other languages. I have laboured them with diligence, I hope with success; such at least as can be expected in a task, which no man, however learned or sagacious, has yet been able to perform.

Some words there are which I cannot explain, because I do not understand them; these might have been omitted very often with little inconvenience, but I would not so far indulge my vanity as to decline this confession: for when *Tully* owns himself ignorant whether *lessus*, in the twelve tables, means a *funeral song*, or *mourning garment*; and *Aristotle* doubts whether *ovus*, in the *Iliad*, signifies a *mule*, or *mulster*, I may surely, without shame, leave some obscurities to happier industry, or future information.

The rigour of interpretive lexicography requires that the *explanation*, and the *word explained*, should be always reciprocal; this I have always endeavoured, but could not always attain. Words are seldom exactly synonymous; a new term was not introduced, but because the former was thought inadequate: names, therefore, have often many ideas, but few ideas have many names. It was then necessary to use the proximate word, for the deficiency of single terms can very seldom be supplied by circumlocution; nor is the inconvenience great of such mutilated interpretations, because the sense may easily be collected entire from the examples.

In every word of extensive use, it was requisite to mark the progress of its meaning, and show by what gradations of intermediate sense it has passed from its primitive to its remote and accidental signification; so that every foregoing explanation should tend to that which follows, and the series be regularly concatenated from the first notion to the last.

This is specious, but not always practicable; kindred senses may be so interwoven, that the perplexity cannot be disentangled, nor any reason be assigned why one should be ranged before the other. When the radical idea branches out into parallel ramifications, how can a consecutive series be formed of senses in their nature collateral? The shades of meaning sometimes pass imperceptibly into each other; so that though on one side they apparently differ, yet it is impossible to mark the point of contact. Ideas of the same race, though not exactly alike, are sometimes so little different, that no words can express the dissimilitude, though the mind easily perceives it, when they are exhibited together; and sometimes there is such a confusion of acceptations, that discernment is wearied, and distinction puzzled, and perseverance herself hurries to an end, by crowding together what she cannot separate.

These complaints of difficulty will, by those that have never considered words beyond their popular use, be thought only the jargon of a man willing to magnify his labours, and procure veneration to his studies by involution and obscurity. But every art is obscure to those that have not learned it: this uncertainty of terms, and commixture of ideas, is well known to those who have joined philosophy with grammar; and if I have not expressed them very clearly, it must be remembered that I am speaking of that which words are insufficient to explain.

The original sense of words is often driven out of use by their metaphorical acceptations, yet must be inserted for the sake of a regular origination. Thus I know not whether *ardour* is used for *material heat*, or whether *flagrant*, in *English*, ever signifies the same with *burning*; yet such are the primitive ideas of these words, which are therefore set first, though without examples, that the figurative senses may be commodiously deduced.

Such is the exuberance of signification which many words have obtained, that it was scarcely possible to collect all their senses; sometimes the meaning of derivatives must be sought in the mother term, and sometimes deficient explanations of the primitive may be supplied in the train of derivation. In any case of doubt or difficulty, it will be always proper to examine all the words of the same race; for some words are slightly passed over to avoid repetition, some admitted easier and clearer explanation than others, and all will be better understood, as they are considered in greater variety of structures and relations.

All the interpretations of words are not written with the same skill, or the same happiness: things equally easy in themselves, are not all equally easy to any single mind. Every writer of a long work commits errors, where there appears neither ambiguity to mislead, nor obscurity to confound him; and in a search like this, many felicities of expression will be casually overlooked, many convenient parallels will be forgotten, and many particulars will admit improvement from a mind utterly unequal to the whole performance.

But many seeming faults are to be imputed rather to the nature of the undertaking, than the negligence of the performer. Thus some expla-

nations are unavoidably reciprocal or circular, as *bind*, the female of the *flag*; *flag*, the male of the *bind*: sometimes easier words are changed for harder, as *burial* into *sepulture* or *interment*, *into* into *defecative*, *dryness* into *fecity* or *aridity*, *into* into *paroxysm*; for the easiest word, whatever it be, can never be translated into one more easy. But easiness and difficulty are merely relative, and if the present prevalence of our language should invite foreigners to this dictionary, many will be assisted by those words which now seem only to increase or produce obscurity. For this reason have endeavoured frequently to join a *French* and *Roman* interpretation, as to *CHER*, to *cherish*, or *exhilarate*, that every learner of *English* may be assisted by his own tongue.

The solution of all difficulties, and the supply of all defects, must be sought in the examples subjoined to the various senses of each word, arranged according to the time of their authors.

When I first collected these authorities, I was desirous that every quotation should be useful; I therefore extracted from philosophers principles of science; from historians remarkable facts; from chymists complete processes; from divines exhortations; and from poets beautiful descriptions. Such is design, while it is yet at a distance from execution. When the time called upon me to range this accumulation of elegance and wisdom into an alphabetical series, I soon discovered that the bulk of my volumes would frighten the student, and was forced to depart from my scheme of including all that was pleasing or useful in *English* literature, and reduce my transcripts very often to clusters of words, in which scarcely any meaning is retained; thus to the weariness of copying, I was condemned to add the vexation of expunging. Some passages I have yet spared, which may relieve the labour of verbal searches, and intersperse with verdure and flowers the dusty deserts of barren philology.

The examples, thus mutilated, are no longer to be considered as conveying the sentiments or doctrine of their authors; the word for the sake of which they are inserted, with all its appendages, has been carefully preserved; but it may sometimes happen, by hasty detraction, that the general tendency of the sentence may be changed: the divine may desert his tenets, or the philosopher his system.

Some of the examples have been taken from writers who were never mentioned as masters of elegance or models of style; but words must be sought where they are used; and in what papers eminent for purity, can terms of manufacture or agriculture be found? Many quotations serve another purpose, than that of proving the bare existence of words, and are therefore selected with less scrupulousness than those which are to teach their structures and relations.

My purpose was to admit no testimony of living authors, that I might not be misled by partiality; and that none of my contemporaries might have reason to complain; nor have I departed from this resolution, but when some performance of common excellence excited my veneration, when my memory supplied me, from late books, with

example that was wanting, or when my heart, the tenderness of friendship, solicited admission a favourite name.

so far have I been from any care to grace my pages with modern decorations, that I have studiously endeavoured to collect examples and authorities from the writers before the restoration, of which works I regard as the wells of English understanding, as the pure sources of genuine diction. A language, for almost a century, has, by the concurrence of many causes, been gradually detaching from its original Teutonic character, and leaning towards a Gallic structure and phraseology, from which it ought to be our endeavour to recall it, by making our ancient volumes the standard work of style, admitting among the additions of later times, only such as may supply real deficiencies, such as are readily adopted by the use of our tongue, and incorporate easily with our native idioms.

But as every language has a time of rudeness antecedent to perfection, as well as of false refinement and declension, I have been cautious lest zeal for antiquity might drive me into times remote, and crowd my book with words now longer understood. I have fixed *Sydney's* work the boundary, beyond which I make few excursions. From the authors which rose in the reign of *Elizabeth*, a speech might be formed adequate to all the purposes of use and elegance. If the language of theology were extracted from *Hooker*; the translation of the Bible; the terms of natural knowledge from *Bacon*; the phrases of politics, war, and navigation from *Raleigh*; the dialect of poetry and fiction from *Spenser* and *Sidney*; and the diction of common life from *Shakespeare*, our ideas would be lost to mankind, for want of English words, in which they might be expressed. It is not sufficient that a word is found, unless it be so combined as that its meaning is apparently determined by the tract and tenour of the sentence; such passages I have therefore chosen, and when it happened that any author gave a definition of a term, or such an explanation as is equivalent to a definition, I have placed his authority as a supplement to my own, without regard to the chronological order, that is otherwise observed.

Some words, indeed, stand unsupported by authority, but they are commonly derivative nouns or adverbs, formed from their primitives by regular and constant analogy, or names of things seldom occurring in books, or words of which I have reason to doubt the existence.

There is more danger of censure from the multiplicity than paucity of examples; authorities it sometimes seem to have been accumulated without necessity or use, and perhaps some will find fault, which might, without loss, have been omitted. But a work of this kind is not hastily to be charged with superfluities: those quotations, which to careless or unskilful perusers appear on to repeat the same sense, will often exhibit, to a more accurate examiner, diversities of signification, or, at least, afford different shades of the same meaning: one will shew the word applied to persons, another to things; one will express ill, another a good, and a third a neutral

sense; one will prove the expression genuine from an ancient author; another will shew it elegant from a modern: a doubtful authority is corroborated by another of more credit; an ambiguous sentence is ascertained by a passage clear and determinate; the word, how often so ever repeated, appears with new associates and in different combinations, and every quotation contributes something to the stability or enlargement of the language.

When words are used equivocally, I receive them in either sense; when they are metaphorical, I adopt them in their primitive acceptation.

I have sometimes, though rarely, yielded to the temptation of exhibiting a genealogy of sentiments, by shewing how one author copied the thoughts and diction of another: such quotations are indeed little more than repetitions, which might justly be censured, did they not gratify the mind, by affording a kind of intellectual history.

The various syntactical structures occurring in the examples have been carefully noted; the licence or negligence with which many words have been hitherto used, has made our style capricious and indeterminate; when the different combinations of the same word are exhibited together, the preference is readily given to propriety, and I have often endeavoured to direct the choice.

Thus have I laboured by settling the orthography, displaying the analogy, regulating the structures, and ascertaining the signification of English words, to perform all the parts of a faithful lexicographer: but I have not always executed my own scheme, or satisfied my own expectations. The work, whatever proofs of diligence and attention it may exhibit, is yet capable of many improvements: the orthography which I recommend is still controvertible, the etymology which I adopt is uncertain, and perhaps frequently erroneous; the explanations are sometimes too much contracted, and sometimes too much diffused, the significations are distinguished rather with subtilty than skill, and the attention is harassed with unnecessary minuteness.

The examples are too often injudiciously truncated, and perhaps sometimes, I hope very rarely, alledged in a mistaken sense; for in making this collection I trusted more to memory, than in a state of disquiet and embarrassment, memory can contain, and purposed to supply at the review what was left incomplete in the first transcription.

Many terms appropriated to particular occupations, though necessary and significant, are undoubtedly omitted; and of the words most studiously considered and exemplified, many senses have escaped observation.

Yet these failures, however frequent, may admit extenuation and apology. To have attempted much is always laudable, even when the enterprise is above the strength that undertakes it: To rest below his own aim is incident to every one whose fancy is active, and whose views are comprehensive; nor is any man satisfied with himself because he has done much, but because he can conceive little. When first I engaged in this work, I resolved to leave neither words nor things unexamined, and pleased myself with a

prospect of the hours which I should revel away in feasts of literature, with the obscure recesses of northern learning, which I should enter and ransack; the treasures with which I expected every search into those neglected mines to reward my labour, and the triumph with which I should display my acquisitions to mankind. When I had thus enquired into the original of words, I resolved to show likewise my attention to things; to pierce deep into every science, to enquire the nature of every substance of which I inserted the name, to limit every idea by a definition strictly logical, and exhibit every production of art or nature in an accurate description, that my book might be in place of all other dictionaries whether appellative or technical. But these were the dreams of a poet doomed at last to wake a lexicographer. I soon found that it is too late to look for instruments, when the work calls for execution, and that whatever abilities I had brought to my task, with those I must finally perform it. To deliberate whenever I doubted, to enquire whenever I was ignorant, would have protracted the undertaking without end, and, perhaps, without much improvement; for I did not find by my first experiments, that what I had not of my own was easily to be obtained: I saw that one enquiry only gave occasion to another, that book referred to book, that to search was not always to find, and to find was not always to be informed; and that thus to pursue perfection, was, like the first inhabitants of Arcadia, to chase the sun, which, when they had reached the hill where he seemed to rest, was still beheld at the same distance from them.

I then contracted my design, determining to confide in myself, and no longer to solicit auxiliaries, which produced more incumbrance than assistance: by this I obtained at least one advantage, that I set limits to my work, which would in time be ended, though not completed.

Despondency has never so far prevailed as to depress me to negligence; some faults will at last appear to be the effects of anxious diligence and persevering activity. The nice and subtle ramifications of meaning were not easily avoided by a mind intent upon accuracy, and convinced of the necessity of disentangling combinations, and separating similitudes. Many of the distinctions which to common readers appear useless and idle, will be found real and important by men versed in the school philosophy, without which no dictionary shall ever be accurately compiled, or skillfully examined.

Some senses however there are, which, though not the same, are yet so nearly allied, that they are often confounded. Most men think indistinctly, and therefore cannot speak with exactness; and consequently some examples might be indifferently put to either signification: this uncertainty is not to be imputed to me, who do not form, but register the language; who do not teach men how they should think, but relate how they have hitherto expressed their thoughts.

The imperfect state of some examples I lamented, but could not remedy, and hope they will be compensated by innumerable passages selected with propriety, and preserved with exactness;

some shining with sparks of imagination, and some replete with treasures of wisdom.

The orthography and etymology, though perfect, are not imperfect for want of care, because care will not always be successful, and recollection or information come too late for it.

That many terms of art and manufacture omitted, must be frankly acknowledged; but this defect I may boldly alledge that it was avoidable: I could not visit caverns to learn a miner's language, nor take a voyage to perfect my skill in the dialect of navigation, nor visit warehouses of merchants, and shops of artists, to gain the names of wares, tools and operations of which no mention is found in books; where a favourable accident, or easy enquiry brought within my reach, has not been neglected; but it has been a hopeless labour to glean up words by courting living information, and collecting the fullness of one, and the roughness of another.

To furnish the academicians *della Crusca* words of this kind, a series of comedies called *Fiera*, or the *Fair*, was professedly written by *Buonaroti*; but I had no such assistant, and therefore was content to want what they must have wanted likewise, had they not luckily been supplied.

Nor are all words which are not found in the vocabulary, to be lamented as omissions. Of the laborious and mercantile part of the people, the diction is in a great measure casual and mutable; many of their terms are formed for some temporary or local convenience, and though current at certain times and places, are in others entirely unknown. This fugitive cant, which is always in a state of increase or decay, cannot be regarded as any part of the durable materials of a language, and therefore must be suffered to perish with other things unworthy of preservation.

Care will sometimes betray the appearance of negligence. He that is catching opportunities which seldom occur, will suffer those to pass unregarded, which he expects hourly to return: he that is searching for rare and remote things, will neglect those that are obvious and familiar; thus many of the most common and current words have been inserted with little illustration, because in gathering the authorities, I forbore to copy those which I thought likely to occur whenever they were wanted. It is remarkable that, in reviewing my collection, I found the word *dis* unexamplified.

Thus it happens, that in things difficult there is danger from ignorance, and in things easy from confidence; the mind, afraid of greatness, and disdainful of littleness, hastily withdraws herself from painful searches, and passes with scornful rapidity over tasks not adequate to her powers; sometimes too secure for caution, and again too anxious for vigorous effort; sometimes idle in a path, and sometimes distracted in labyrinths, and dissipated by different intentions.

A large work is difficult because it is large, even though all its parts might singly be perfected with facility; where there are many things to be done, each must be allowed its share of time and labour, in the proportion only which is

ears to the whole; nor can it be expected, that the stones which form the dome of a temple, could be squared and polished like the diamond of a ring.

Of the event of this work, for which, having laboured it with so much application, I cannot but have some degree of parental fondness, it is atual to form conjectures. Those who have been persuaded to think well of my design, will require that it should fix our language, and put stop to those alterations which time and chance have hitherto been suffered to make in it without opposition. With this consequence I will confess that I flattered myself for a while; but now begin to fear that I have indulged expectation which either reason nor experience can justify. When we see men grow old and die at a certain time one after another, from century to century, we laugh at the elixir that promises to prolong life to a thousand years; and with equal justice say the lexicographer be derided, who being able to produce no example of a nation that has preserved their words and phrases from mutability, will imagine that his dictionary can embalm his language, and secure it from corruption and decay, that it is in his power to change sublunary nature, and clear the world at once from folly, imity and affectation.

With this hope, however, academies have been instituted, to guard the avenues of their languages, to retain fugitives, and repulse intruders; but their vigilance and activity have hitherto been vain; sounds are too volatile and subtle for legal restraints; to enchain syllables, and to lash the wind, are equally the undertakings of pride, unwilling to measure its desires by its strength. The French language has visibly changed under the inspection of the academy; the style of *Amelot's* translation of father *Paul* is observed by *Le Courrier* to be *un peu passé*; and no *Italian* will maintain, that the diction of any modern writer is not perceptibly different from that of *Boccaccio*, *Machiavel*, or *Caro*.

Total and sudden transformations of a language seldom happen; conquests and migrations are now very rare: but there are other causes of change, which, though slow in their operation, are invisible in their progress, are perhaps as much superior to human resistance, as the revolutions of the sky, or intumescence of the tide. Commerce, however unnecessary, however lucrative, as it depraves the manners, corrupts the language; they that have frequent intercourse with strangers, to whom they endeavour to accommodate themselves, must in time learn a mingled dialect, like the jargon which serves the trackers on the *Mediterranean* and *Indian* coasts. This will not always be confined to the exchange, the warehouse, or the port, but will be communicated by degrees to other ranks of the people, and be at last incorporated with the current speech.

There are likewise internal causes equally formidable. The language most likely to continue long without alteration, would be that of a nation, used a little, and but a little above barbarity, secluded from strangers, and totally employed in securing the conveniences of life; either with-

out books, or like some of the *Mabometan* countries, with very few: men thus busied and unlearned, having only such words as common use requires, would perhaps long continue to express the same notions by the same signs. But no such constancy can be expected in a people polished by arts, and classed by subordination, where one part of the community is sustained and accommodated by the labour of the other. Those who have much leisure to think, will always be enlarging the stock of ideas, and every increase of knowledge, whether real or fancied, will produce new words, or combinations of words. When the mind is unchained from necessity, it will range after convenience; when it is left at large in the fields of speculation, it will shift opinions; as any custom is disused, the words that expressed it must perish with it; as any opinion grows popular, it will innovate speech in the same proportion as it alters practice.

As by the cultivation of various sciences, a language is amplified, it will be more furnished with words deflected from their original sense; the geometrician will talk of a courtier's zenith, or the excentrick virtue of a wild hero, and the physician of sanguine expectations and phlegmatic delays. Copiousness of speech will give opportunities to capricious choice, by which some words will be preferred, and others degraded; vicissitudes of fashion will enforce the use of new, or extend the signification of known terms. The tropes of poetry will make hourly encroachments, and the metaphorical will become the current sense: pronunciation will be varied by levity or ignorance, and the pen must at length comply with the tongue; illiterate writers will, at one time or other, by publick insatiation, rise into renown, who, not knowing the original import of words, will use them with colloquial licentiousness, confound distinction, and forget propriety. As politeness increases, some expressions will be considered as too gross and vulgar for the delicate, as others too formal and ceremonious for the gay and airy; new phrases are therefore adopted, which must, for the same reasons, be in time dismissed. *Swiss*, in his petty treatise on the *English* language, allows that new words must sometimes be introduced, but proposes that none should be suffered to become obsolete. But what makes a word obsolete, more than general agreement to forbear it? and how shall it be continued, when it conveys an offensive idea, or recalled again into the mouths, of mankind, when it has once become unfamiliar by disuse, and displeasing by unfamiliarity.

There is another cause of alteration more prevalent than any other, which yet in the present state of the world cannot be obviated. A mixture of two languages will produce a third distinct from both, and they will always be mixed, where the chief part of education, and the most conspicuous accomplishment, is skill in ancient or in foreign tongues. He that has long cultivated another language, will find its words and combinations crowd upon his memory; and haste and negligence, refinement and affectation, will obtrude borrowed terms and exotick expressions.

The great pest of speech is frequency of translation. No book was ever turned from one language into another, without importing something of its native idiom; this is the most mischievous and comprehensive innovation; single words may enter by thousands, and the fabric of the tongue continue the same, but new phraseology changes much at once; it alters not the single stones of the building, but the order of the columns. If an academy should be established for the cultivation of our style, which I, who can never wish to see dependence multiplied, hope the spirit of *English* liberty will hinder or destroy, let them, instead of compiling grammars and dictionaries, endeavour, with all their influence, to stop the licence of translatours, whose idleness and ignorance, if it be suffered to proceed, will reduce us to babble a dialect of *France*.

If the changes that we fear be thus irresistible, what remains but to acquiesce with silence, as in the other insurmouutable distresses of humanity? It remains that we retard what we cannot repel, that we palliate what we cannot cure. Life may be lengthened by care, though death cannot be ultimately defeated: tongues, like governments, have a natural tendency to degeneration; we have long preserved our constitution, let us make some struggles for our language.

In hope of giving longevity to that which its own nature forbids to be immortal, I have devoted this book, the labour of years, to the honour of my country, that we may no longer yield the palm of philology, without a contest, to the nations of the continent. The chief glory of every people arises from its authors: whether I shall add any thing by my own writings to the reputation of *English* literature, must be left to time: much of my life has been lost under the pressures of disease; much has been trifled away; and much has always been spent in provision for the day that was passing over me; but I shall not think my employment useless or ignoble, if by my assistance, foreign nations, and distant ages, gain access to the propagators of knowledge, and understand the teachers of truth; if my labours afford light to the repositories of science, and add celebrity to *Bacon*, to *Hooker*, to *Milton*, and to *Boyle*.

When I am animated by this wish, I look with pleasure on my book, however defective, and deliver it to the world with the spirit of a man that has endeavoured well. That it will immediately become popular I have not promised to myself: a few wild blunders, and risible absurdities, from which no work of such multiplicity was ever free, may for a time furnish folly with laughter, and harden ignorance into contempt; but useful diligence will at last prevail, and there never can be wanting some who distinguish desert; who will consider that no dictionary of a living tongue ever can be perfect, since while it is hastening to publication, some words are budding, and some falling away; that a whole life cannot be spent upon syntax and etymology, and that even a whole life would not be sufficient; that he, whose design includes whatever language can express, must often speak of what he does not understand; that a writer will sometimes be hurried by eagerness

to the end, and sometimes faint with weariness under a task, which *Scaliger* compares to the labours of the anvil and the mine; that what is obvious is not always known, and what is known is not always present; that sudden fits of inadvertency will surprize vigilance, slight avocations will seduce attention, and casual eclipses of the mind will darken learning; and that the writer shall often in vain trace his memory at the moment of need, for that which yesterday he knew with intuitive readiness, and which will come recalled into his thoughts to-morrow.

In this work, when it shall be found that much is omitted, let it not be forgotten that much the wife is performed; and though no book was ever spared out of tenderness to the author, and the world is little solicitous to know whence proceeded the faults of that which it condemns; yet it may gratify curiosity to inform it, that the *English Dictionary* was written with little assistance of the learned, and without any patronage of the great; not in the soft obscurities of retirement, or under the shelter of academick bowers, but amidst inconvenience and distraction, in sickness and in sorrow. It may repress the triumph of malignant criticism to observe, that if our language is not here fully displayed, I have never failed in an attempt which no human power has hitherto completed. If the lexicons of ancient tongues, now immutably fixed, and compressed in a few volumes, be yet, after the toil of five ages, inadequate and delusive; if the aggregated knowledge, and co-operating diligence of the *Italian* academicians, did not secure them from the censure of *Benci*; if the embodied critics of *France*, when fifty years had been spent upon their work, were obliged to change its economy, and give their second edition another form; I may surely be contented without the praise of perfection, which, if I could obtain, is this gloom of solitude; what would it avail me? I have protracted my work till most of those whom I wished to please have sunk into the grave, and success and miscarriage are equal sounds: I therefore dismiss it with frigid tranquility, having little to fear or hope from censure or from praise.

THE HISTORY OF THE ENGLISH LANGUAGE.

THOUGH the *Britons* or *Welsh* were the first possessors of this island, whose names are recorded, and are therefore in civil history always considered as the predecessors of the present inhabitants; yet the deduction of the *English* language from the earliest times of which we have any knowledge to its present state, requires no mention of them: for we have so few words which can, with any probability, be referred to *British* roots, that we justly regard the *Saxons* and *Angles* as nations totally distinct. It has been conjectured, that when the *Saxons* seized this country, they suffered the *Britons* to live among them in a state of vassalage, employed in the culture of the ground, and other laborious and ignoble service. But it is scarcely possible, that a nation, however depressed, should have been mixed with another

considerable numbers without some communication of their tongue, and therefore, it may, in great reason, be imagined, that those, who are not sheltered in the mountains, perished by sword.

"The whole fabrick and scheme of the *English* language, is *Gothick* or *Teutonic*: it is a dialect that tongue, which prevails over all the northern countries of *Europe*, except those where the *Avonian* is spoken. Of these languages *Drakes* has thus exhibited the genealogy.

GOTHICK,

ANGLO-SAXON,	FRANCICK,	CIMBRICK,
Dutch, Frisick, English;	German,	Islandick, Norwegian; Swedish, Danish:

"Of the *Gothick*, the only monument remaining, is a copy of the Gospels somewhat mutilated, which, from the silver with which the characters are adorned, is called the *silver book*. It is now preserved at *Upsal*, and having been twice published before, has been lately reprinted at *Oxford*, under the inspection of Mr *Lye*, the editor of *Jutland*. Whether the diction of this venerable manuscript be purely *Gothick*, has been doubted; it may however to exhibit the most ancient dialect we to be found of the *Teutonic* race; and the *Saxon*, which is the original of the present *English*, was either derived from it, or both have descended from some common parent.

"What was the form of the *Saxon* language; when, about the year 450; they first entered *Britain*, cannot now be known. They seem to have been a people without learning, and very probably without an alphabet; their speech, therefore, being always cursory and extemporaneous, it has been artless and unconnected, without any modes of transition or involution of clauses; such abruptness and inconnection may be observed even in their later writings. This barbarism may be supposed to have continued during their wars with the *Britons*, which for a time left them no leisure for softer studies; nor is there a reason for supposing it abated, till the year 60, when *Augustine* came from *Rome* to convert them to Christianity. The Christian religion always implies or produces a certain degree of civility and learning; they then became by degrees acquainted with the *Roman* language; and so gained, from time to time, some knowledge and elegance, till in three centuries they had formed a language capable of expressing all the sentiments a civilised people, as appears by king *Alfred's* paraphrase or imitation of *Boethius*, and his short essay, which I have selected as the first specimen of ancient *English*."

Dr Johnson after quoting three chapters of this great monarch's paraphrase in the original *Saxon*, at gives a specimen of a "version of the Gospels the age of which, (he says,) is not certainly known, but was probably written between the

time of *Alfred* and that of the *Norman* conquest, and therefore may properly be inserted here.

"Translations seldom afford just specimens of a language, and least of all those in which a scrupulous and verbal interpretation is endeavoured, because they retain the phraseology and structure of the original tongue; yet they have often this convenience, that the same book, being translated in different ages, affords opportunity of marking the gradations of change, and bringing one age into comparison with another. For this purpose I have placed the *Saxon* version and that of *Wicliffe*, written about the year 1380, in opposite columns; because the convenience of easy collation seems greater than that of regular chronology."

Of this last we shall insert a few verses:

"1 In the dayes of Eroude kyng of Judce ther was a prest Zacarye by name: of the sort of *Abia*, and his wyf was of the doughtiris of *Aaron*; and her name was *Elizabeth*.

2 An bothe weren juste biforn God: goynge in alle the maundementis and justifyingis of the Lord withouten playnt:

3 And thei hadden no child, for *Elizabeth* was bareyn and bothe weren of greet age in her dayes.

4 And it besel that whanne *Zacarye* schould do the office of presthood in the order of his course to fore God.

5 After the custom of the presthood, he wente forth by lot and entride into the temple to encense.

6 And at the multitude of the puple was without forth and preyede in the our of encensyng.

7 And an aungel of the Lord apperide to him; and stood on the right half of the auter of encense.

8 And *Zacarye* steynge was afayed: and drede fel upon him.

9 And the aungel sayde to him, *Zacarye* drede thou not: for thy preier is herd, and *Elizabeth* thi wif schal bere to thee a sone: and his name schal be *clepid Jon*.

10 And joye and gladying schal be to thee: and manye schulen have joye in thi natyvyte.

11 For he schal be great biforn the Lord: and he schal not drinke wyn ne sydyr, and he schal be fulschid with the holy gost yit of his modir wombe.

12 And he schal converte manye of the children of *Israel* to her Lord God.

13 And he schal go biforn in the spiryte and vertu of *Helye*; and he schal turne the hertis of the fadris to the sonis, and men out of beleefe: to the prudence of just men, to make redy a penytyt puple to the Lord.

14 And *Zacarye* seyde to the aungel: whereof schal I wyte this? for *Y* am old: and my wyf hath gone fer in hir dayes.

15 And the aungel answerde and seyde to him, for *Y* am *Gabriel* that stonde nygh biforn God, and *Y* am sent to thee to speke and to evangelise to thee these thingis, and lo thou schalt be dounbe.

16 And thou schalt not mowe speke, til into the day in which these thingis schulen be don,

for thou hast not beleved to my wordis, whiche schulen be fulfilled in her tyme.

17 And the puple was abydyng Zacarye : and thei wondriden that he taryede in the temple.

18 And he gede out and myghte not speke to hem : and thei knewen that he hadde seyn a visoun in the temple, and he bekenide to hem : and he dwellede stille dounbe.

19 And it was done whanne the dayes of his office weren fulfilled : he went into his hous.

20 And aftir these dayes Elizabeth his wif conseyvede and hidde hir fyve monethis and seyde.

21 For so the Lord dide to me in the dayes in whiche he bibeld to take away my reprof among men."

"Of the *Saxon* poetry some specimen is necessary, though our ignorance of the laws of their metre and the quantities of their syllables, which it would be very difficult, perhaps impossible, to recover, excludes us from that pleasure which the old bards undoubtedly gave to their contemporaries.

"The first poetry of the *Saxons* was without rhyme, and consequently must have depended upon the quantity of their syllables : but they began in time to imitate their neighbours, and close their verses with correspondent sounds.

"The two passages which I have selected, contain apparently the rudiments of our present lyric measures, and the writers may be justly considered as the genuine ancestors of the *English* poets."

From these, for the reasons above assigned, we shall only quote the first stanza :

"He mai him fore adreden,
That he thanne ore bidde ne mügen,
Vor that bilimfeth ilome.
Ther is wis that bit and bote
And bet bivoren dome.
Death com on this midelard
Thurth thes deses onde,
And senne and sofge and iswine,
On se and on londe."

"About the year 1150, the *Saxon* began to take a form in which the beginning of the present *English* may be plainly discovered ; this change seems not to have been the effect of the *Norman* conquest, for very few *French* words are found to have been introduced in the first hundred years after it ; the language must therefore have been altered by causes like those which, notwithstanding the care of writers and societies instituted to obviate them, are even now daily making innovations in every living language. I have exhibited a specimen of the language of this age from the year 1135 to 1140 of the *Saxon* chronicle, of which the latter part was apparently written near the time to which it relates."

Of this chronicle a few lines may here suffice to gratify the antiquarian :

"This xære for the king Stephne ofer sæ to Normandi. And ther wes under-fangen. forthi that he wenden that he sculde ben alsuic alse the eom wea. And for he hadde get his tresor. ac he to deld it and scatered sotlice. Micel hadde Henri king gadered gold and sylver. and ne god ne didde me for his saule thar of. Tha the king

Stephne to Engla land com tha macod he his adering æt Oxen ford. And thar he nam the bisceop Roger of Seres-beni. And Alexander biſcop of Lincoln- and te Lanceler Roger hise neves. and dide ælle in perisfuntli hi jafen up here cætes. Tha tha ſuikes under-gæton that he milde was and soft and god. and na juſtife ne dide tha diden hi alle wunder. Hi hadden him mæred maked and athes ſueren." &c.

"Nearly about this time (says the Dr) the following pieces of poetry seem to have been written, of which I have inserted only short fragments : the first is a rude attempt at the present measure of 8 syllables, and the second is a native introduction to *Robert of Gloucester*, being composed in the same measure, which, however rare and barbarous it may seem, taught the way to the *Alexandrines* of the *French* poetry.

"Fua in ſee bi weſt ſpaygne.

If a lond thote cokaygne.

Ther niſ lond under heuenriche.

Of wel of godniſ hit iliche.

Thoy paradif be miri and briyt.

Cokaygn if of fairir ſyt.

What if ther in paradif.

Bot graffe and flure and generif.

Thoy ther be ioi and gret dute.

Ther niſ met bote frute.

Ther niſ halle bare no bench.

Bot watir man if thurſto quenche.

Beth ther no men but two.

Hely and enok alſo.

Clinglich may hi go.

Whar ther wonith men no mo." &c.

SANCTA MARGARETTA.

"OLDE ant yonge i preit ou oure ſolief for to kith.
Thenchet on god that yef ou wit oure ſumme in bete.

Here mai tellen ou. wid wordeſ feire and ſwele.
The vie of one meidan. waſ hoten Margrete.

Hire fader waſ a patriac. af ic ou tellen maȝ.
In auntioge wiſ echeſ i the falſe lay.

Deve godeſ ant dounbe. he ſerued nitt ant day.
So deden mony othere. that ſinget weillawey.

Theodofiuſ waſ if nome. on criſt ne levede in nout.

He levede on the falſe godeſ. that weren wid-boden wroutt.

Tho that child ſculde chriſtine ben. ic coude well in thoutt.

E bed wen it were ibore. to dethe it were ibroott."

"In these fragments, the adulteration of the *Saxon* tongue, by a mixture of the *Norman*, becomes apparent ; yet it is not so much characterised by the admixture of new words, which might be imputed to commerce with the continent, as by changes of its own forms and terminations ; which no reason can be given.

"Hitherto the language used in this island however different in successive time, may be called *Saxon* ; nor can it be expected, from the nature of things gradually changing, that any time can be assigned, when the *Saxon* may be said to cease, and the *English* to commence. *Robert of Gloucester*, however, who is placed by the chronicle in the 13th century, seems to have used a kind of intermediate

mediate diction, neither *Saxon* nor *English*; is work therefore we see the transition exhibited, and, as he is the first of our writers in me, of whom any large work remains, a more concise quotation is extracted. He writes apparently in the same measure with the foregoing or of *St Margaret*, which polished into greater fineness, appeared to our ancestors so suitable to the genius of the *English* language, that it was continued in use almost to the middle of the 17th century.

Of the batayles of Denemarch, that hii dude in this londe
 it worst were of alle othere, we mote abbe an honde.
 Of hii were. vor othere adde somwanne ydo, Romeyns & Saxons, & wel wuste that lond therto.
 hii ne kepte yt holde nogt, bote robby, and ffende,
 I destrue, & berne, & sle, & ne couthe abbe non ende.
 I bote lute yt nas worth, they hii were ouercome ylome.
 myd spes and great poer as prest effone hii come.
 Of Adelwolf of hys lond kyng was twenty zer.
 Deneyns come by hym ryuor than he dude er," &c.

THE kyng Aldered fone tho then wey of deth nome,
 Of vel, the vyfty zer of ys kynedom.
 Wymbourne he was byured, as God gef that cas,
 gode Alfrede; ys brother, after hym kyng was.
 ed, this noble man, as in the zer of grace he nom
 te hundred and sixty & tuclue the kynedom.
 he adde at Rome ybe, & vor ys grete wysdom,
 pope Leon hym bleffede, tho he thuder com.—
 Of Alfrede was the wyfost kyng, that long was byuore.
 they me segge the lawes beth in worre tyme vorlore,
 yt nogt so hiis daye. vor they he in worre were,
 es he made rygtuollere, and strengore than er were.
 e he was god ynou, and zyt, as me telleth me, was more than ten zer old, ar he couthe ys abece.
 ys gode moder ofte smale gyftes hym tok,
 to bylene other ple, and loky on his boke.
 hat by por clergie ys rygt lawes he wonde,
 t neuere er nere y mad, to gouerny ys lond.
 lyf eygte and twenty zer in ys kynedom ylaste.
 r ys deth he was ybured at Wynchestre atte laste."

Sir JOHN MANDEVILLE wrote, as he himself informs us, in the 14th century, and his work, which comprising a relation of many different parlours, consequently required the use of many words and phrases, may be properly specified in place. Of the following quotations, (says Dr Johnson,) I have chosen the first, because it shows, in some measure, the state of *European* science as it was of the *English* tongue; and the second, be-

cause it is valuable for the force of thought and beauty of expression."

But as our sole object here is to show the progress of the *English Language*, that of the *Sciences* being sufficiently illustrated, in the historical accounts prefixed to the respective treatises on each, in the course of this work, we need only insert a few lines from each of these quotations:

"In that lond, ne in many othere bezonde that, no man may see the sterre transmontane, that is clept the sterre of the see, that is unmevable, and that is toward the Northe, that we clepen the lode sterre." But men see another sterre, the contrarie to him, that is toward the South, that is clept Antartyk. And right as the schip men taken here avys here, and governe hem be the lode sterre, right so don schip men bezonde the parties, be the sterre of the South, the which sterre apperethe not to us. And this sterre, that is toward the Northe, that we clepen the lode sterre, ne apperethe not to hem. For whiche cause, men may wel perceyve, that the londe and the see ben of rownde schapp and forme. For the partie of the firmament schewethe in o contree, that schewethe not in another contree. And men may well preuen be experience and sotyle compassement of wytt, that zif a man fond passages be schippes, that wold go to serchen the world, men myghte go be schippe all aboute the world, and aboven and benethen."

"II. And I John Maundeville knyghte above-sayd, (alle thoughte I be unworthi) that departed from our contrees and passed the see, the zeer of grace 1322. that have passed manye londes and manye yles and contrees, and cerched manye fulle straunge places, and have ben in many a fulle gode honourable compaignie, and at many a faire dede of armes, (alle he it that I dide none myself, for myn unable insuffisance) now I am comen hom (mawgree my self) to reste: for gowtes, artetykes, that me distrenynen, tho dysfynen the ende of my labour, azenot my wille (God knowethe.) And thus takynge solace in my wretched reste, recordynge the tyme passed, I have fulfilled theise thinges and putte hem wyrtyn in this boke, as it wolde come in to my mynde, the zeer of grace 1356 in the 34 zeer that I departede from our contrees."

"The first of our authours, who can be properly said to have written *English*, was Sir JOHN GOWER, who, in his *Confession of a Lover*, calls CHAUCER his disciple, and may therefore be considered as the father of our poetry.

"NOWE for to speke of the commune,
 It is to drede of that fortune,
 Which hath befall in sondry londes:
 But ofte for defaute of bondes
 All sodenly, er it be wist,
 A tunne, when his lie aris
 Tobreketh, and renneth all aboute,
 Which els shulde noghte gone out." &c.

"The history of our language is now brought to the point at which the history of our poetry is generally supposed to commence, the time of the illustrious GEOFFREY CHAUCER, who may perhaps, with great justice, be stiled the first of our versifiers who wrote poetically. He does not how-

ever appear to have deserved all the praise which he has received, or all the censure that he has suffered. *Dryden*, who, mistaking genius for learning, in confidence of his abilities, ventured to write of what he had not examined, ascribes to *Chaucer* the first refinement of our numbers, the first production of easy and natural rhymes, and the improvement of our language, by words borrowed from the more polished languages of the continent. *Skinner* contrarily blames him in harsh terms for having vitiated his native speech by *whole cartloads of foreign words*. But he that reads the works of *Gower* will find smooth numbers and easy rhymes, of which *Chaucer* is supposed to have been the inventor, and the *French* words, whether good or bad, of which *Chaucer* is charged as the importer. Some innovations he might probably make, like others, in the infancy of our poetry, which the paucity of books does allow us to discover with particular exactness; but the works of *Gower* and *Lydgate* sufficiently evince, that his diction was in general like that of his contemporaries: and some improvements he undoubtedly made by the various dispositions of his rhymes, and by the mixture of different numbers, in which he seems to have been happy and judicious. I have selected several specimens both of his prose and verse; and among them, part of his translation of *Boethius*, to which another version, made in the time of queen *Mary* is opposed. It would be improper to quote very sparingly an author of so much reputation, or to make very large extracts from a book so generally known."

CHAUCER.

"ALAS! I wepyng am constrained to begin verse of sorowfull matter, that whilom in florishyng studie made delitable dities. For lo! rendyng muses of Poetes enditen to me thynges to be writen, and dreie teres. At laste no drede ne might overcome tho muses, that thei ne weren fellows, and foloweden my waie, that is to saie, when I was exiled, thei that weren of my youth whilom welfull and grene, comforten now sorowfull wiertes of me olde man: for elde is comen unwarely upon me, hasted by the harmes that I have, and sorowe hath commaunded his age to be in me. Heres hore aren shad overtimeliche upon my hed: and the slacke skinne tremblethe of mine emptied bodie. Thiike deth of men is welefull, that he ne cometh not in yeres that be swete, but cometh to wretches often icleped."

COLVILLE.

"I THAT in tyme of prospeite, and floryshyng studye, made pleasaunte and delectable dities, or verses: alas now beyng heawy and sad ouerthrown in aduersitie, am compelled to sele and tast beuies and grief. Beholde the muses Poeticall, that is to saye: the pleasure that is in poetes verses, do appoynt me, and compel me to writ these verses in meter, and the sorowfull verses do wet my wretched face with very waterye teates, yssuing out of my eyes for sorowe. Whiche muses no feare without doute could ouercome, but that they would follow me in my journey of exile or banishment. Sometime the ioye of happy and lusty delectable youth dyd comfort me, and nowe

the course of sorowfull olde age causeth me to reioyce. For hasty old age vnlooked for is come vpon me with all her incommodities and euils, and sorowe hath commaunded and brought me into the same old age, that is to say: that sorowe causeth me to be olde, before my time come of olde age. The hoer heares do growe vntimely vpon my heade, and my reuiled skinne trembleth my flesh cleane consumed and wasted with sorowe. Mannes death is happy, that cometh not in youth, when a man is lustye, and in pleasure or woe: but in time of aduersitie, when it is often desired."

THE PROLOGUES OF THE CANTERBURY TAILS OF CHAUCER, from the M.S.

"WHEN that Aprilis with his shouris fote,
The drought of March had percid to the rote,
And bathid every veyn in such licour,
Of which vertue engendrid is the flour.
When Zephyrus eke, with his swete breth
Enspirid hath, in every holt and beth
The tender croppis; and that the yong Som
Hath in the Ramm his halve cours yrunn:
And smale foulis makin melodye,
That slepin alle night with opin eye,
(So prickith them nature in ther corage)
Then longin folk to go on pilgrimage:
And palmers for to sekin strange strondes,
To servin hallowes couth in sondry londes:
And specially fro every shir' is end
Of England, to Canterbury they wend,
The holy blisfult martyr for to seke,
That them hath holpin whan that they were eke."

GODE COUNSAILE OF CHAUCER.

"FLIE fro the prese and dwell with solfastiche,
Suffise unto thy gode though it be small,
For horde hath hate, and clumbyng thiknesse,
Prece hath envie, and wele it brent oer alle;
Savour no more than the behovyn shall.
Rede well thy self, that othir folke canst rede,
And trouthe the shall delivir it 'is no drede.
Paine the not eche crokid to redresse,
In trust of her that tournith as a balle;
Grete reft standith in litil businesse,
Beware also to spurne againe a nalle,
Strive not as doith a crocke with a walle,
Demith thy self that demist othir's dede,
And trouthe the shall deliver it 'is no drede.
That the is sent receve in buxomeneffe;
The wastlyng of this worlde askith a fall;
Here is no home, here is but wildirnesse,
Forthe pilgrim, forthe o best out of thy fall,
Loke up on high, and thanke thy God of all.
Weivith thy luste and let thy ghost the ledde,
And trouthe the shall deliver it 'is no drede."

"LYDGATE was a monk of *Bury*, who wrote about the same time with *Chaucer*. Out of his prologue to his third book of the *Fall of Princes*, a few stanzas are selected, which, being compared with the style of his two contemporaries, will show that our language was then not written by caprice, but was in a settled state.

"LIKE a pilgrim which that goeth on foot,
And hath none horse to releue his trouayle,
Whote, dry and wery, and may find no botte
Of wel cold whan thrust doth hym assaile,

ine nor licour, that may to hym auayle,
 ight fo fare I which in my businesse,
 o succour fynde my rudenes to redresse.
 "I meane as thus, I have no fresh licour
 ut of the conduites of Calliope,
 or through Clio in rhyethorike no floure,
 ny labour for to refresh me:
 or of the sisters in nouber thirfe three,
 hich with Cithera on Parnaso dwell,
 bey neuer me gaue drink once of their wel.
 "Nor of theyr springes clere and cristalline,
 at sprange by touchyng of the Pegase,
 heir fauour lacketh my making ten lumine
 ynde theyr bawme of so great scarcitie,
 o tame theyr tunnes with some drop of plentie
 Poliphemus throw his great blindnes,
 ith in me derked of Argos the brightnes.
 "Thus was I set and stode in double werre
 the metyng of feareful wayes tweyne,
 e one was this, who euer list to lere,
 hereas good wyll gan me constrayne;
 echas t'accomplish for to doe my payne,
 me ignoraunce, with a menace of drete,
 y penne to rest I durst not procede."

"FORTESCUE was chief justice of the Com-
 mon-Pleas, in the reign of king Henry VI. He
 died in 1471, after the battle of Tewkesbury,
 and probably wrote most of his works in his pri-
 vacy. The following passage is selected from his
 book of the *Difference between an absolute and li-
 ted Monarchy*."

"HYE may peradventure be marvelid by some
 n, why one Realme is a Lordshyp only *Royall*,
 and the Prynce thereof rulyth yt by his Law,
 callid *Jus Regale*; and another Kyngdome is
 Lordshipp, *Royal and Politike*, and the Prince
 thereof rulyth by a Lawe, callid *Jus Politicum &
 Regale*; sythen thes two Princes beth of egall Au-
 thorite.

"To this dowte it may be answered in this
 manner; The first Institution of thes twoo Re-
 gimes, upon the Incorporation of them, is the
 use of this diversyte.

"When Nembroth by Might, for his own Glo-
 ry, made and incorporate the first Realme, and
 duyd it to hymself by Tyrannye, he would
 have it governyd by any other Rule or Lawe,
 but by his own Will; by which and for th' ac-
 complishment thereof he made it. And therfor,
 though he had thus made a Realme, holy Scrip-
 ture denyd to call hym a Kyng, *Quia Rex dicitur
 legendo*; Whych thyng he dyd not, but oppres-
 sed the People by Myght, and therfor he was a
 Tyrant, and callid *Primus Tyrannorum*. But holy
 it callith hym *Robustus Venator coram Deo*. For
 the Hunter takyth the wyld beste for to sele
 and eat hym; so Nembroth subduyd to him the
 people with Might, to have their service and their
 goods, using upon them the Lordshipp that is
 callid *Dominium Regale tantum*. After hym Be-
 th that was callid first a Kyng, and after hym his
 he Nynus, and after hym other Panymys; They,
 Example of Nembroth, made them Realms,
 and not have them rulyd by other Lawys than
 their own Wills. Which Lawys ben right
 and under good Princes; and their Kyngdoms
 ben most resembling to the Kyngdome of God,

which reynith upon Man, rulyng hym by his own
 Will. Wherefor many Crystyn Princes use the
 same Lawe; and therfor it is, that the Lawys
 sayen, *Quod Principi placuit Legis habet vigorem*.
 And thus I suppose first beganne in Realmys, *Do-
 minium tantum Regale*. But afterward, when Man-
 kynd was more manufecte, and better disposyd to
 Vertue, Grete Communalities, as was the Felishipp,
 that came into this Lond with Brute, wylling to be
 unyed and made a Body Politike callid a Realme,
 havynge an Heed to governe it; as after the Say-
 ing of the philosopher, every Communalite unyed
 of many parts must needs have an Heed; than they
 chose the same Brute to be their heed and Kyng.
 And they and he upon this Incorporation and In-
 stitution, and unyng of themselves into a Realme,
 ordyned the same Realme so to be rulyd and jus-
 tyfyd by such Laws, as they al would assent to;
 which Law therfor is callid *Politicum*; and bycause
 it is mynystrid by a Kyng, it is callid *Regale*. *Do-
 minium Politicum dicitur quasi Regimen, plurium
 Scientia, sive Consilio ministratum*. The Kyng of
 Scotts reynith upon his People by this Lawe, *vi-
 delicet, Reginine Politico & Regali*. And as Dio-
 dorus Syculus saith, in his Boke *de prisicis Historiis*,
 The Realm of Egypte is rulid by the same Lawe,
 and therfor the Kyng therof chaungith not his
 Lawes, without the Assent of his People. And
 in like forme as he saith is ruled the Kyngdome
 of Saba, in Felici Arabia, and the Lond of Libie;
 And also the more parte of all the Realmys in
 Afrike. Which manner of Rule and Lordshipp,
 the sayd Diodorus in that Boke, praystith gretely.
 For it is not only good for the Prince, that may
 thereby the more sewerly do Justice, than by his
 owne Arbitriment; but it is also good for his Peo-
 ple that receyve thereby, such Justice as they de-
 syer themselves. Now as me seemeth, it ys shewyd
 opynly ynough, why one Kyng rulyth and reynith
 on his People *Dominio tantum Regali*, and that o-
 ther reynith *Dominio Politico & Regali*: For that
 one Kyngdome beganne, of and by, the Might of
 the Prince, and the other beganne, by the Desier
 and Institution of the People of the same Prince."

"Of the works of Sir THOMAS MORE it was
 necessary to give a larger specimen, both because
 our language was then in a great degree formed
 and settled, and because it appears from *Bea Yon-
 son*, that his works were considered as models of
 pure and elegant style. The tale, which is placed
 first, because earliest written, will show what an
 attentive reader will, in perusing our old writers,
 often remark, that the familiar and colloquial part
 of our language, being diffused among those classes
 who had no ambition of refinement, or affectation
 of novelty, has suffered very little change. This
 is another reason why the extracts from this au-
 thor are more copious: his works are carefully
 and correctly printed, and may therefore be bet-
 ter trusted than any other edition of the *English
 books* of that, or the preceding ages.

"A merry iest how a sergeant would learne to
 playe the frere. Written by maister Thomas
 More in his youth.

"WYSE men alway,

Affirme and say,

That best is for a man:

Digitized by Google Diligently,

Diligently,
 For to apply,
 The busines that he can,
 And in no wyse,
 To enterpryse,
 An other faculte,
 For he that wyll,
 And can no skyll,
 Is neuer lyke to the.
 He that hath laste,
 The hofiers crafte,
 And falleth to making shone,
 The smythe that shall,
 To payntyng fall,
 His thrift is well nigh done.
 A blacke draper,
 With whyte paper,
 To go to wrytyng scole,
 An olde butler,
 Becum a cutler,
 I wene shall proue a sole.—
 All that ensue,
 Such craftes new,
 They drue so farre a cast,
 That euermore,
 They do therfore,
 Beshrewe themselfe at last.
 This thing was tryed
 And verelyed,
 Here by a sergeaunt late,
 That thrifly was,
 Or he coulde pas,
 Rapped about the pate,
 Whye that he would
 See how he could,
 A little play the frere :
 Now yf you wyll,
 Knowe how it fyll,
 Take hede and ye shall here.
 It happed so,
 Not long ago,
 A thrifty man there dyed,
 An hundred ponde,
 Of nobles rounde,
 That had he layd a side :
 His sonne he wolde,
 Should haue this golde,
 For to beginne with all :
 But to suffise
 His chyld, well thrise,
 That money was to smal.
 Yet or this day
 I have hard say,
 That many a man certesse,
 Hath with good cast,
 Be ryche at last,
 That hath begonne with lesse.
 But this yonge manne,
 So well beganne,
 His money to imploy,
 That certainly,
 His policy,
 To see it was a joy,
 For lest sum blast,
 Myght ouer cast,
 His ship, or by mischaunce,
 Men with sum wile,
 Myght hym begyle,

And minish his substance,
 For to put out,
 All maner dout,
 He made a good pufuay,
 For euery whyt,
 By his own wyt,
 And toke an other way :
 First fayre and wele,
 Therof much dele,
 He dygged it in a pot,
 But then him thought,
 That way was nought,
 And there he left it not.
 So was he faine,
 From thence agayne,
 To put it in a cup,
 And by and by,
 Couetously,
 He supped it fayre vp,
 In his own brest,
 He thought it best,
 His money to enclose,
 Then wist he well,
 What euer fell,
 He could it neuer lose.
 He borrowed then,
 Of other men,
 Money and merchaundise :
 Neuer payd it,
 Up he laid it,
 In like maner wyse.
 Yet on the gere,
 That he would were,
 He reight not what he spent,
 So it were nyce,
 As for the price,
 Could him not miscontent.
 With lusty sporte,
 And with resort,
 Of ioly company,
 In mirth and play,
 Full many a day,
 He liued merely.
 And men had sworne,
 Some man is borne,
 To have a lucky howre,
 And so was he,
 For such degre,
 He gat such honour,
 That without dout,
 When he went out,
 A sergeaunt well and fayre,
 Was redy straye,
 On him to wayte,
 As sone as on the mayre.
 But he doubteffe,
 Of his mekenesse,
 Hated such pompe and pride,
 And would not go,
 Companied so,
 But drewe himself a side,
 To saint Katharine,
 Streight as a line,
 He gate him at a tyde,
 For deuocion,
 Or promocion,
 There would he needs abyde.

There spent he fast,
Till all were past,
And to him came there meny,
To aske theyr det;
But none could get;
The valour of a peny.
With visage stout,
He bare it out,
Euen vnto the harde hedge;
A month or twaine,
Tyll he was faine,
To laye his gowne to pledge.
Than was he there,
In greater feare,
Than ere that he came thithet;
And would as fayne,
Depart againe,
But that he wist not whither.
Than after this,
To a frende of his,
He went and there abode,
Where as he lay,
So sick alway,
He myght not come abrode.
It happed than,
A marchant man,
That he ought money to,
Of an officere,
Than gan enquire,
What him was best to do.
And he answerde,
Be not aferde,
Take an accion therfore,
I you behest,
I shall hym reste,
And than care for no more.
I feare quod he,
It wyll not be,
For he wyll not come out.
The sergeaunt said,
Be not afrayd,
It shall be brought about.
In many a game,
Lyke to the same,
Haue I bene well in vre,
And for your sake,
Let me be bake,
But yf I do this cure.
Thus part they both,
And forth then goth,
A pace this officere,
And for a day,
All his array,
He chaunged with a frere.
So was he dight,
That no man might,
Hym for a frere deny,
He dopped and dooked,
He spake and looked,
So religiously.
Yet in a glasse,
Or he would passe,
He toted and he peered,
His harte for pryde,
Lepte in his syde,
To see how well he freered.
Than forth a pace,
Onto the place,
Unto the place,

He goeth withouten shame
To do this dede,
But now take hede,
For here begynneth the game.
He drew hym ny,
And softly,
Streight at the dore he knocked;
And a damfell,
That hard hym well,
There came and it vnlocked,
The frere sayd,
Good spede fayre mayd,
Here lodgeth such a man,
It is told me:
Well syr quod she,
And yf he do what than;
Quod he maystresse,
No harm doutleest:
It longeth for our order,
To hurt no man,
But as we can,
Euery wight to forder,
With hym truly,
Fayne speake would I.
Sir quod she by my say,
He is so like,
Ye be not lyke,
To speake with hym to day,
Quod he fayre may,
Yet I you pray,
This much at my desire,
Vouchsafe to do,
As go hym to,
And say an austen frere
Would with hym speke,
And matters breake,
For his anayle certayn,
Quod she I wyll,
Stonde ye here styll,
Tyll I come downe agayn,
Vp is she go,
And told hym so,
As she was bode to say,
He mistrustyn,
No maner thyng,
Sayd mayden go thy way,
And fetch him hyder,
That we togyder,
May talk. A downe she gothe,
Vp she hym brought,
No harme she thought,
But it made some folke wrothe,
This officere,
This fayned frere,
Whan he was come aloft,
He dopped than,
And grete this man,
Religiously and oft.
And he agayn,
Ryght glad and fayn,
Toke hym there by the hande,
The frere than sayd,
Ye be dismayd,
With trouble I understande.
In dede quod he,
It hath with me,
Bene better than it is.

R r r

By

Syr quod the frere,
 Be of good chere,
 Yet shall it after this.
 But I would now
 Comen with you,
 In counsaile yf you please,
 Or ellys nat
 Of matters that,
 Shall set your heart at ease.
 Downe went the mayd,
 The marchaunt sayd,
 Now say on gentle frere,
 Of thys tydyng,
 That ye me bryng,
 I long full fore to here.
 Whan there was none,
 But they alone,
 The frere with euyll grace,
 Sayd, I rest the,
 Come on with me,
 And out he toke his mace:
 Thou shalt obay,
 Come on thy way,
 I have the in my clouche,
 Thou goest not hence,
 For all the pense,
 The mayre hath in his pouche.
 This marchaunt there,
 For wrath and fere,
 He waxyng welnygh wood,
 Sayd horsen thefe,
 With a mischefe,
 Who hath taught the thy good.
 And with his fist,
 Vpon the lyft,
 He gaue hym such a blow,
 That backward downe,
 Almost in towne,
 The frere is ouerthrow.
 Yet was this man,
 Well fearder than,
 Lest he the frere had slayne,
 Tyll with good rappes,
 And heuy clappes,
 He dawde hym vp agayne.
 The frere toke harfe,
 And vp he starte,
 And well he layde about,
 And so there goth,
 Betwene them both,
 Many a lusty clout.
 They rent and tere,
 Eche others here,
 And claue togyder fast,
 Tyll with luggyng,
 And with tuggyng,
 They fell downe bothe at last.
 Than on the grounde,
 Togyder rounde,
 With many a sadde stroke,
 They roll and rumble,
 They turne and tumble,
 As pygges do in a poke.
 So long aboue,
 They heue and shoue,
 Togider that at last,
 The mayd and wyfe,
 To breake the strife,

Hyed them vpward fast.
 And whan they spye,
 The captaynes lye,
 Both waltring on the place,
 The freres hood,
 They pulled a good,
 Adowne about his face.
 Whyle he was blynde,
 The wenche behynde,
 Lent him leyd on the flore,
 Many a ioule,
 About the noule,
 With a great batyl-dore.
 The wyfe came yet,
 And with her fete,
 She hoipe to kepe him downe,
 And with her rocke,
 Many a knocke,
 She gaue hym on the crowne.
 They layd his mace,
 About his face,
 That he was wood for payne:
 The fryre frappe,
 Gate many a swappe,
 Tyll he was full nygh slayne.
 Vp they hym lift,
 And with yll thrift,
 Hedlyng a long the stayre,
 Downe they hym threwe,
 And sayde adewe,
 Commende us to the mayre.
 The frere arose,
 But I suppose,
 Amased was his hed,
 He shoke his cares,
 And from grete seares,
 He thought hym well yfled.
 Quod he now lost,
 Is all this cost,
 We be neuer the nere.
 Ill mote he be,
 That caused me,
 To make my self a frere.
 Now masters all,
 Here now I shall,
 Ende there as I began,
 In any wyse,
 I would auyse,
 And counsaile every man,
 His owne craft vse,
 All newe refuse,
 And lyghtly let them gone:
 Play not the frere,
 Now make good chere,
 And welcome euerych one."

The Descripcion of RICHARD the thirde.
 "RICHARDE the thirde sonne, of whom we
 nowe entreate, was in witte and courage
 with either of them, in bodye and prowesse
 vnder them bothe, little of stature, ill fetured
 limmes, croke backed, his left shoulder much
 higher than his right, hard fauoured of visage,
 and such as is in states called warlye, in other
 menne otherwise, he was malicious, wrathful,
 enuious, and from afore his birth, euer froward.
 It is for trouth reported, that the duchesse his
 mother had so much a doe in her trauaile, that the

ould not bee deliuered of hym uncutte: and
 at hee came into the worlde with the feete for-
 warde, as menne bee borne outwarde, and (as the
 time runneth) also not vntoed, whither menne
 f hatred reporte aboue the trouthe, or elles that
 ature chaunged her courfe in hys beginninge,
 whiche in the courfe of his lyfe many thinges va-
 turallie committed. None euill captaine was
 ee in the warre, as to whiche his disposicion was
 more metely then for peace. Sundrye victories
 adde hee, and sometime ouerthrowes, but neer
 in defaulte as for his owne parfone, either of
 ardinesse or polytike order, free was hee called
 f dyspence, and somewhat aboue hys power
 berall, with large giftes hee get him vntedfaste
 endeshippe, for whiche hee was faine to pil and
 boyle in other places, and get him stedfast hatred.
 lee was clofe and secrete, a deepe dissimuler,
 wlye of counteynaunce, arrogant of heart, out-
 wardly coumpinable where he inwardly hated,
 ot letting to kisse whome he thoughte to kyll:
 ipitious and cruell, not for euill will alway, but
 ter for ambition, and either for the suretie or
 ncrease of his estate. Frende and foe was much
 that indifferent, where his aduantage grew, he
 shed no mans deathe, whose life withstoode his
 urpose. He slewe with his owne handes king
 lenry the sixt, being prisoner in the Tower, as
 menne constantly saye, and that without com-
 mandement or knowledge of the king, whiche
 vould vndoubtedly yf he had entended that
 hinge, haue appointed that boocherly office, to
 some other then his owne borne brother."

A letter writtten with a cole by Sir THOMAS MORE
 to hys daughter maiestres MARGARET ROPER,
 within a while after he was prisoner in the
 Towre.

MYNE OWN good daughter, our lorde be thank-
 d I am in good helthe of bodye, and in good
 quiet of minde: and of worldly thynges I no more
 lesyer then I haue. I beseeche hym make you all
 nery in the hope of heauen. And such thynges
 s I somewhat longed to talke with you all, con-
 cerning the worlde to come, our Lorde put them
 nto your myndes, as I truste he dothe and better
 o by hys holy spirite: who blesse you and pre-
 erue you all. Written wyth a cole by your ten-
 der louing father, who in hys pore prayers forget-
 eth none of you all, nor your babes, nor your
 urses, nor your good husbundes, nor your good
 usbundes shrewde wyues, nor your fathers
 hrewde wyfe neither, nor our other frendes.
 And thus fare ye hartely well for lacke of paper.
 THOMAS MORE, knight.

Two short ballettes which Sir THOMAS MORE
 made for hys pastime while he was prisoner in
 the Tower of London.

Lewys the lost louer.

Ev flattering fortune, loke thou neuer so sayre,
 Or neuer so plesiantly begin to smile,
 As though thou wouldst my ruyne all repayre,
 During my life thou shalt not me begile.
 Trust shall I God, to entre in a while.
 Hys haue or heauen sure and vniforme.
 Euer after thy calme, loke I for a storme.

DAUy the dycer.

"LONG was I lady Lucke your seruing man,
 And now haue lost agayne all that I gat,
 Wherefore whan I think on you nowe and than,
 And in my mynde remember this and that,
 Ye may not blame me though I beshrew your cat,
 But in fayth I blesse you agayne a thousand times,
 For leading me now some layfure to make rymes."

"At the same time with Sir THOMAS MORE
 lived SKELTON, the poet laureate of Henry VIII.
 from whose works it seems proper to insert a few
 stanzas, though he cannot be said to have attain-
 ed great elegance of language."

The prologue to the BOUGE OF COURTE,
 "IN Autumpne whan the sonne in vyrgyne
 By radyante hete enryped hath our corne
 Whan Luna full of mutabylte
 As Emperes the dyademe hath worne
 Of our pole artyke, smyllynge halfe in scorne
 At our foly, and our vntedfastnesse
 The time whan Mars to warre hym dyd dres.

I callynge to mynde the great auctoryte
 Of poetes olde, whiche full craftely
 Vnder as couerte termes as coule be
 Can touche a trouthe, and cloke subtylly
 With freibe vttaraunce full sentencyously
 Dyuerse in style some spared not vyce to wryte
 Some of mortalitie nobly dyd endyte

Whereby I rede, they: renome and theyr fame
 Maye neuer dye, but euermore endure
 I was fore moued to a forse the same
 But ignoraunce full soone dyd me dyscure
 And shewed that in this arte I was not sure
 For to illumine she sayd I was to dulle
 Aduysynge me my penne awaye to pulle

And not to wryte, for he so wyll attayne
 Excedyng farther than his connyng is
 His heed maye be harde, but feble is brayne
 Yet haue I knowen such er this
 But of reproche surely he maye not mys
 That clymmeth hyer than he may fotinge haue.
 What and he slyde downe, who shall him saue?

Thus vp and downe my mynde was drawen
 and cast
 That I ne wyfte what to do was beste
 So fore enwered that I was at the laste
 Enforced to slepe, and for to take some reste
 And to lye downe as soone as I my dresse
 At Harwyche porte slumbrynge as I laye
 In myne hostes house called powers keye."

"Of the wits that flourished in the reign of
 Henry VIII. none has been more frequently cele-
 brated than the earl of SURRY; and this history
 would therefore have been imperfect without some
 specimens of his works, which yet is not easy to
 distinguish from those of Sir THOMAS WYAT and
 others, with which they are confounded in the e-
 dition that has fallen into my hands. The three
 first are, I believe, Surry's; the rest, being of the
 same age, are selected, some as examples of dif-
 ferent measures, and one as the oldest composi-
 tion which I have found in blank verse."

The first and 4th of these w^{ch} insert entire; of
 the 2d and 3d a few lines each may suffice.

R r r r a

Description

Description of SPRING, wherein eche thing re-
newes, save only the lover.

"THE foote season that bud, and bloome fourth
bringes,

With grene hath cladde the hyll, and eke the vale,
The Nightingall with sethers new she finges;
The turtle to her mate hath told the tale;
Somer is come, for every spray now springes,
The hart hath hunge hys olde head on the pale,
The bucke in brake his winter coate he flynges;
The fishes flete with newe repayed scale:
The adder all her slough away she flynges,
The swift swallow pursueth the flies smalle,
The busy bee her honey how she mynges;
Winter is worne that was the floures bale.
And thus I see among these pleasant thynges
Eche care decayes, and yet my sorrow springes."

Description of the restless estate of a lover.

"WHEN youth had left me half the race,
That Cupides scourge had made me runne;
I looked back to meet the place,
From whence my weary course begunne:

And then I saw howe my desyre
Misguiding me had led the waye,
Myne eyne to greedy of theyre hyre,
Had made me lose a better prey.

For when in sighes I spent the day,
And could not cloake my grief with game;
The boyling smoke dyd still bewray,
The present heat of secret flame:

And when myne eyen dyd still pursue,
The flying chase of theyre request;
Theyre greedy looks dyd oft renew,
The hydden wounde within my breste."

Description of the fickle Affections, Pangs, and
Sleights of Love.

"SUCH wayward wayes hath Love, that most part
in discord

Ovr willes do stand, whereby our hartes but sel-
dom do accord:

Decyte is hys delighte, and to begyle and mocke
The simple hartes which he doth strike with frow-
ard divers stroke.

He causeth th' one to rage with golden burning
darte,

And doth alay with Leaden cold, again the others
harte.

Whose gleames of burning fyre and easie sparkes
of flame,

In balance of unequal weyght he pondereth by ame
From easie ford where I myghte wade and passe
full well,

He me withdrawes and doth me drive, into a depe
dark hell:

And me withholdes where I am calde and offred
place,

And willes me that my mortal foe I do beseeke of
Grace;

He letteth me to pursue a conquest welnere wonne
To follow where my paynes were lost, ere that
my sute begunne.

So by this means I know how soon a hart may turne
From warre to peace, from truce to stryfe, and so
agayne returne.

I know how Love doth rage upon a yeyking
mynde,

How smalle a nete may take and make a harte of
gentle kynde:

Or else with seldom swete to season hepes of gall,
Revived with a glympse of Grace old sorrowes to
let fall.

The hydden traynes I know, and secret sares of
Love,

How soone a loke will prynte a thoughte that ne-
ver may remove.

The slipper state I know, the sodein turnes from
welthe

The doubtfull hope, the certaine woode, and sure
despaired helthe.

A praise of his ladie.

"GIVE place you ladies and be gone,
Boast not your selves at all,
For here at hand approacheth one,
Whose face will stayne you all.

The vertue of her lively lookes
Excels the precious stone,
I wishe to have none other bookes
To read or look upon.

In eche of her two christall eyes,
Smyleth a naked boy;
It would you all in heart suffice
To see that lampe of joye.

I think nature hath lost the mould,
Where she her shape did take;
Or else I doubt if nature coulde
So fayre a creature make.

She may be well comparde

Unto the Pheenix kinde,
Whose like was never scene nor heard,
That any man can fynde.

In lyfe she is Diana chaste

In trouth Penelope,
In woord and eke in dede stedfast;
What will you more we say:

If all the world were sought so farre,
Who could finde suche a wight,
Her beauty twinkleth lyke a starre
Within the frosty night.

The Lover refused of his love, embraceth vertue.

My youthfull yeres are past,

My joyfull dayes are gone,

My lyfe it may not last,

My grave and I am one.

My myrth and joyes are fled,

And I a man in wo,

Desirous to be ded,

My mischiefe to forgo.

I burne and am a colde,

I freeze anyddes the fyre,

I see the doth withhold

That is my honest desyre.

I see my helpe at hande,

I see my lyfe also,

I see where she doth stande

That is my deadly fo.

I see how she doth see,

And yet she wil be blynde,

I see in helping me,

She seeks and wil not fynde.

I see how she doth wrye,
When I begynne to mone,
I see when I come nye,
How fayne she would be gone.
I see what wil ye more,
She will me gladly kill,
And you shall see therfore
That she shall have her will.
I cannot live with stones,
It is too hard a foode,
I will be dead at ones
To do my Lady good.

the death of ZOROAS, an EGYPTIAN ASTRONOMER in the first fight that ALEXANDER had with the PERSIANS.

Now clattering armes, now raging broyls of warre,
In passe the noys of drefull trumpetts clang,
Crowded with shafts, the heaven with cloude of darts,
Covered the ayre. Against full fatted bulles,
Forsoeth kyndled yre the lyons keene,
Hose greedy gutts the gnawing hunger prickes;
Macedons against the Persians fare,
Now corpses hyde the purpurde soyle with blood;
Urged slaughter on eche side, but Perses more,
Oyst' fieldes bebled, theyr heartes and numbers bate,
Inted while they gave backe, and fall to flighte.

Light over stooode in snowwhite armour brave,
The Memphitic Zoroas, a cunning clarke,
Whom the heaven lay open as his booke;
And in celestial bodies he could tell
The moving meeting light, aspect, eclips,
And influence, and constellations all;
That earthly chaunces would betyde, what yere,
Plenty storde, what signe forewarned death,
Now wiuter gendred snow, what temperature
The prime tyde doth season well the soyle,
By summer burnes, why autumn bath ripe grapes,
Whither the circle quadrate may become,
Whether our tunes heavens harmony can yelde,
Four begyns among themselves how great
Proportion is; what sway the erring lightes
Doth send in course gayne that fyrst movyng heaven;

That, grees one from another distance be,
That starr doth lett the hurtfull fyre to rage,
Whom more mylde what opposition makes,
That fyre doth qualifie Mavorles fyre,
That house eche one doth seeke, what plannett
Raignes

Within this heaven sphere, nor that small thynges
Peake, whole heaven he closeth in his brest.
His sage then in the starres hath spied the fates
Treated him death without delay, and, sith,
Saw he could not fatal order chaunge,
Reward he prest in battayle, that he might
Fete with the rulers of the Macedons,
His right hand desirous to be slain,
He bouldest borne, and worthiest in the feilde;
And as a wight, now wery of his life,
And seeking death, in fyrst front of his rage,
Comes desperately to Alexanders face,
To him with darts one after other throwes,
With recklesse wordes and clamour him provokes,

And sayth, Nestanaks bastard shamefull stayne
Of mothers bed, why lovest thou thy strokes,
Cowardes among, Turn thee to me, in case
Manhood there be so much left in thy heart,
Come fight with me, that on my helmet weare
Apollo's laurell both for learnings laude,
And eke for martial praise, that in my shielde
The seven fold Sophie of Minerve contain,
A match more mete Syr King, then any here.
The noble prince amoved takes ruth upon
The wilfull wight, and with soft words ayen,
O monstrous man (quoth he) what so thou art,
I pray thee live, ne do not with thy death
This lodge of Lore, the Muses mansion marre;
That treasure house this hand shall never spoyle,
My sword shall never bruise that skilfull brayne,
Long gather'd heapes of science sone to spill;
O how fayre fruites may you to mortall men
From Widdoms garden give; how many may
By you the wifer and the better prove:
What error, what mad moode, what frenze thee
Perfwades to be downe, sent to depe Averno,
Where no artes flourish, nor no knowledge vailes
For all these sawes. When thus the sovereign said,
Alighted Zoroas with sword unsheathed,
The careless king there smoate above the greve,
At th' opening of his quishes wounded him,
So that the blood down trailed on the ground:
The Macedon perceiving hurt, gan gnahe,
But yet his mynde he bent in any wise
Hym to forebare, sett spurrs unto his stede
And turnde away, left anger of his smarte
Should cause revenger hand deale balefull blowes.
But of the Macedonian chieftaines knights,
One Meleager could not bear this sight,
But ran upon the said Egyptian rude,
And cutt him in both knees: he fell to ground,
Wherewith a whole rout came of foulidiours sterne,
And all in pieces bewed the fely seg,
But happily the soule fled to the starres,
Where, under him, he hath full sight of all,
Whereth he gazed here with reaching looke.
The Persians waild such sapience to forgoe,
The very sone the Macedonians withst
He would have lived, king Alexander selfe
Demde him a man unmete to dye at all;
Who wonne like praise for conquest of his Yre,
As for stout men in field that day subdued,
Who princes taught how to discern a man,
That in this head so rare a jewel beares.

"BARCLAY wrote about 1550; his chief work is the *Ship of Fools* of which the following extract will show his style.

OF MOCKERS and SCORNERS and FALSE ACCUSERS.

O HEARTLESS fooles, haste hear to our doctrine,
Leave off the wayes of your enormitie,
Enforce you to my precept to incline,
For here shall I shewe you good and veritie:
Encline, and ye finde shall great prosperitie,
Ensuing the doctrine of our fathers olde,
And godly lawes in valour worth great golde.

Who that will followe the graces manyfolde
Which are in vertue, shall finde auancement:
Wherfore ye fooles that in your sinne are bolde,
Enfue ye widdome, and leaue your lewde intent,
Widdome is the way of men most excellent:

Therefore

Therefore haue done, and shortly spede your pace,
To quaynt your self and company with grace.

Learne what is vertue, therein is great solace,
Learne what is truth, sadnes and prudence,
Let grutch be gone, and grauitie purchase,
Forake your folly and inconuenience,
Cease to be fooles and ay to sue offence,
Follow ye vertue, chiefe roote of godlynes
For it and wisedom is ground of clenlynes.

Wisedome and vertue two thinges are doubtles,
Whiche man endueth with honour speciall,
But suche heartes as slepe in foolishnes
Knoweth nothing, and will nought know at all:
But in this little barge in principall
All foolish mockers I purpose to reпре,
Clawe he his backe that feeleth itche or greue.

The LENUOY of BARCLAY to the fooles.
Ye mocking fooles that in scorne set your ioy,
Proudly despising Gods punishment:
Take ye example by Cham the sonne of Noy,
Which laughed his father into derision,
Which him after cursed for his transgression,
And made him seruauante to all his lyne and stocke,
So shall ye caytifs at the conclusion,
Since ye are nought, and other scorne and mocke,

"About the year 1553, wrote Dr WILSON, a man celebrated for the politeness of his style, and the extent of his knowledge: what was the state of our language in his time, the following may be of use to show.

PRONUNCIATION is an apte orderinge both of the voyce, countenance, and all the whole bodye, accordyng to the worthines of suche wordes and matter as by speache are declared. The vse hereof is such for anye one that liketh to haue prayse for tellyng his tale in open assemblie, that hauing a good tongue, and a comely countenance, he shal be thought to passe all other that haue the like vtterance: though they haue much better learning. The tongue geueth a certayne grace to euery matter, and beautifieth the cause in like maner, as a swete foundynge lute muche setteth furthe a meane deuised ballade. Or as the founde of a good instrumente styrreth the hearers, and moueth much delite, so a cleare soundyng voice comforteth muche our deintie eares, with muche swete melodie, and causeth vs to allowe the matter rather for the reporters sake, then the reporter for the matters sake. Demosthenes therefore, that famous oratour, beyng asked what was the chiefe point in al oratorie, gaue the chiefe and onely praise to pronounciation; being demaunded, what was the seconde and the thirde, he still made aunswere, Pronounciation, and would make none other aunswere, till they leste askyng, declaryng hereby that arte without vtterance can dooe nothyng, vtterance without arte can dooe right muche. And no doubt that man is in outward appaarence halfe a good clarke, that hath a cleane tongue, and a comely gesture of his body. Æschines lykwyse beyng bannished his countrie through Demosthenes, when he had redde to the Rhodians his own oration, and Demosthenes aunswere thereunto, by force whereof he was bannished, and all they marueiled much at the excellencie of the same: then (quod Æschines) you would haue

marueiled muche moye if you had heard him speake it. Thus beyng cast in myerie and banished for euer, he could not but geue such a good reporte of his deadly and mortal enemy.

"Thus haue I deduced the ENGLISH LANGUAGE from the age of ALFRED to that of ELIZABETH; in some parts imperfectly for want of materials; but I hope, at least, in such a manner that its progress may be easily traced, and its gradations observed, by which it advanced from its first rudeness to its present elegance."

A GRAMMAR OF THE ENGLISH TONGUE

GRAMMAR, which is *the art of using words properly*, comprises 4 parts; Orthography, Etymology, Syntax, and Prosody.

In this diuision and order of the parts of grammar I follow the common grammarians, without enquiring whether a fitter distribution might be found. Experience has long shown this method to be so distinct as to obviat confusion, and so comprehensive as to prevent any inconvenient omission. I likewise use the terms already received, and ready understood, though perhaps others more proper might sometimes be invented. Spelling and other innovators, whose new terms have retarded their learning into neglect, have left sufficient warning against the trifling ambition of teaching in a new language.

ORTHOGRAPHY is *the art of combining letters into syllables, and syllables into words*. It therefore teaches previously the form and sound of letters.

The letters of the English language are,

Roman.	Italick.	Name.
A a	A a	a
B b	B b	be
C c	C c	see
D d	D d	dee
E e	E e	e
F f	F f	eff
G g	G g	gee
H h	H h	aitch
I i	I i	i
J j	J j	j
K k	K k	ka
L l	L l	el
M m	M m	em
N n	N n	en
O o	O o	o
P p	P p	pee
Q q	Q q	cue
R r	R r	ar
S s	S s	ess
T t	T t	tee
U u	U u	u
V v	V v	v
W w	W w	double u
X x	X x	ex
Y y	Y y	wy
Z z	Z z	zed, more commonly <i>izzard</i> , that is <i>hard</i> .

To these may be added certain combinations of letters universally used in printing; as *ch, sh, th, ph, ck, ff, ss, si, fi, si, fi, fi, and &c.*

I is often founded before *r* as a short *u*; as *first*, *first*, *first*.

It forms a diphthong only with *e*, as *field*, *shield*, which is founded as the *ee*; except *friend*, which is founded as *frënd*.

I is joined with *eu* in *lieu*, and *ew* in *vieu*; which triphthongs are founded as the open *u*.

O.

O is long, as *bône*, *obedient*, *corroding*; or short, as *black*, *knock*, *oblique*, *kill*.

Women is pronounced *wöimen*.

The short *o* has sometimes the found of a close *u*, as *son come*.

O coalesces into a diphthong with *a*, as *moan*, *groan*, *approach*; *oa* has the found *o* long.

O is united to *e* in some words derived from Greek, as *economy*; but *oe* being not an English diphthong, they are better founded as they are founded, with only *e*, *economy*.

With *i*, as *oil*, *soil*, *mail*, *noisome*.

This coalition of letters seems to unite the sounds of the two letters as far as two sounds can be united without being destroyed, and therefore approaches more nearly than any combination in our tongue to the notion of a diphthong.

With *o*, as *boot*, *boos*, *cooler*; *oo* has the found of the Italian *u*.

With *u* or *ow*, as *our*, *power*, *flower*; but in some words has only the found of *o* long, as in *fool*, *bowel*, *foam*, *grow*. These different sounds are used to distinguish different significations; as *bow*, an instrument for shooting; *bow*, a depression of the head: *foam*, the she of a boar; *foam*, to scatter seed: *bowel* an orbicular body; *bowel*, a wooden vessel.

Ou is sometimes pronounced like *o* soft, as *court*; sometimes like *o* short, as *cough*; sometimes like *u* close, as *could*; or *u* open, as *rough*, *tough*; which use only can teach.

Ou is frequently used in the last syllable of words which in Latin end in *or*, and are made English, as *honour*, *labour*, *favour*, from *honor*, *labor*, *favor*.

Some late innovators have ejected the *u* without considering that the last syllable gives the found neither of *or* nor *ur*, but a found between them, if not compounded of both; besides that they are probably derived to us from the French nouns in *eur*, as *bonneur*, *faveur*.

U.

U is long in *use*, *confusion*; or short, as *us*, *confession*.

It coalesces with *a*, *e*, *i*, *o*, *u*; but has rather in these combinations the force of the *uw*, as *quaff*, *quest*, *quit*, *quite*, *languish*; sometimes in *ui* the *i* loses its found, as in *juice*. It is sometimes mute before *a*, *e*, *i*, *y*, as *guard*, *quest*, *guise*, *buy*.

U is followed by *e* in *virtue*, but the *e* has no found.

Ue is sometimes mute at the end of a word, in imitation of the French, as *prorogue*, *synagogue*, *plague*, *vague*, *baraque*.

Y.

Y is a vowel, which, as Quintilian observes of one of the Roman letters, we might want without inconvenience, but that we have it. It supplies the place of *i* at the end of words, as *thy*; before an *i*, as *lying*; and is commonly retained in derivative words where it was part of a diph-

thong in the primitive; as *destroy*, *destroyer*; *tray*, *betrayed*, *betrayed*; *pray*, *prayer*; *joy*, *joy*; *day*, *days*.

Y being the Saxon vowel *y*, which was commonly short used where *i* is now put, occurs frequently in old books.

GENERAL RULES.

A vowel in the beginning or middle syllable, before two consonants, is commonly short, as *unity*.

In monosyllables a single vowel before a single consonant is short, as *fig*, *frig*.

Many is pronounced as if it were wrote *may*.

OF CONSONANTS.

B has one unvaried found, such as it obtains in other languages.

It is mute in *debt*, *debtor*, *subtle*, *dark*, *limb*, *dumb*, *thumb*, *climb*, *comb*, *woomb*.

It is used before *l* and *r*, as *black*, *brown*.

C.

C has before *e* and *i* the found of *s*; as *face*, *centric*, *century*, *circular*, *cistern*, *city*, *fecundity*; before *a*, *o*, and *u*, it sounds like *k*, as *calm*, *comedy*, *copper*, *incorporate*, *curiosity*, *conspicuous*.

C might be omitted in the language without loss, since one of its sounds might be supplied by *s*, and the other by *k*, but that it preserves to the etymology of words, as *face* from *facies*, *captive* from *captivus*.

Cb has a found which is analysed into *ch*, as *church*, *ebon*, *crutch*. It is the same found which the Italians give to the *c* simple before *i* and *e*, as *citta*, *cerro*.

Cb is founded like *k* in words derived from the Greek, as *chymist*, *scheme*, *cholera*. *Arch* is commonly sounded *ark* before a vowel, as *archangel*, and with the English found of *ch* before a consonant, as *archbishop*.

Cb, in some French words not yet assimilated, sounds like *sh*, as *machine*, *chaife*.

C, having no determinate found, according to English orthography, never ends a word; therefore we write *sick*, *block*, which were originally *sicke*, *blocke*, in such words. *C* is now mute.

It is used before *l* and *r*, as *clock*, *crofs*.

D.

Is uniform in its found, as *death*, *dignity*.

It is used before *r*, as *draw*, *drofs*; and *e*, as *dwell*.

F.

F, though having a name beginning with *i* vowel, it is numbered by the grammarians among the semi-vowels, yet has this quality of a vowel that it is commodiously founded before a liquid, as *flash*, *fly*, *freckle*. It has an unvariable found except that of *of* is sometimes spoken nearly as *u*.

G.

G has two sounds, one hard, as in *gay*, *gem*; the other soft, as in *gem*, *giant*.

At the end of a word it is always hard, as *snug*, *song*, *frog*.

Before *e* and *i* the found is uncertain.

G before *e* is soft, as *gem*, *generation*, except *gear*, *geld*, *gerse*, *get*, *gewgaw*, and derivatives from words ending in *g*, as *singing*, *stranger*, and generally before *er* at the end of words, as *feign*.

Gb, in the beginning of a word, has the sound of the hard *g*, as *gboſſy*; in the middle, and ſome- times at the end, it is quite ſilent, as *though, right, daybt*, ſpoken *tho' rits, ſouts*.

G is used before b, f, and r.

It seldom begins any but the first syllable, in which it is always sounded with a full breath, except in *beir*, *berb*, *bofler*, *bonoar*, *bumble*, *boneft*, *amour*, and their derivatives.

J. consonant sounds uniformly like the soft g, and is therefore a letter useless, except in etymology, as *exasperation, jester, jocund, judge.*

It is used before *n*, as *knell*, *knot*; but totally loses its sound in modern pronunciation.

Figure 1

The custom is to double the *l* at the end of monosyllables, as *kill, will, full*. These words were ori-

L is sometimes mute, as in *calf, half, halves, alves, could, would, should; psalm, talk, salmon, alcon.*

Le at the end of words is pronounced like a weak *el*, in which the *e* is almost mute, as *table* *buttle*.

N.
N has always the same sound, as noble, manners.
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P.

P is sometimes mute, as in *psalm*, and between *m* and *t*, as *ptem*.

Pb is used for *f* in words derived from the Greek, as *philosopher*, *philanthropy*, *Philip*.

Qu is sometimes founded, in words derived from the French like *le*, as *conquer*, *liquor*, *rising*, *chequer*.

The Saxons used often to put *h* before it, as before *l* at the beginning of words.

R, at the end of some words derived from the Latin or French, is pronounced like a weak *r*, as *obscure*, *sepulchre*.

\$ has a hissing sound, as *fibilation*, *filter*.

· A single *l* seldom ends any word, except in the third person of verbs, as *loves, grows*; and the plurals of nouns, as *trees, bushes, dresses*; the pronouns *this, his, ours, yours, us*; the adverb *thus*; and words derived from Latin; as *rebus, surplis*; the close being always either in *fe, boufe, boffe*, or in *fi*, as *grafs, drefs, hits, left*, anciently *graffe, dreffe*.

Single at the end of words, has a groffer sound, like that of z, as *traces, eyes*, except *this, than, us, which, thence*.

It sounds like *z* before *ion*, if a vowel goes before, as *intrusion*; and like *s*, if it follows a consonant, as *conversion*.

It sounds like *z* before *e* mute, as *refuse*, and before *y* final, as *royal*; and in those words *before*, *desire*, *wisdom*, *prison*, *prisoner*, *prudent*, *present*, *damsel*, *causation*.

It is the peculiar quality of *f* that it may be sounded before all consonants, except *x* and *z*, in which *f* is comprized, *x* being only *kz*, and *z* a hard or grofs *f*. This *f* is therefore termed by grammarians *sua potestate litera*; the reason of which the learned Dr Clarke erroneously supposed to be, that in some words it might be doubled at pleasure. Thus we find in several languages:

Zamp, scatter, sdegno, struccolo, sfavellare, sp
 ombrare, sgranare, sbake, slumber, smell, snips
 space, splendour, spring, squeris, srow, sop, strenght
 stramen, stipe, sventura, swell.

δ is mute in *isle, island, demesne, viscount.*
T.

T has its customary sound, as *take*, *temptation*,
Ti before a vowel has the sound of *f*, as *salva-
tion*, except an *s* goes before, as *ques-tion*, excepting
likewise derivatives from words ending in *ty* as
mirac-ty, *mirac-tyer*.

Th has two sounds; the one soft, as *thus, whether*; the other hard, as *thing, think*. The sound is soft in these words, *then, thence, and there*, with their derivatives and compounds; and in *that, these, thou, thee, thy, thine, their, they, this, those, them, though, thus*, and in all words between two vowels, as *father, whether*; and between *r* and a vowel, as *burthen*.

In other words it is hard, as *thick, thunder, faithful*. Where it is softened at the end of a word, an *e* silent must be added, as *breath, breathe; cloth, clothe*.

V.

V has a sound of near affinity to that of *f*, *vain, vanity*.

From *f*, in the Islandick alphabet, *v* is only distinguished by a diacritical point.

W.

Of *wo*, which in diphthongs is often an undoubted vowel, some grammarians have doubted whether it ever be a consonant; and not rather as it is called a double *u* or *ou*, as *water* may be resolved into *uater*; but letters of the same sound are always reckoned consonants in other alphabets: and it may be observed, that *w* follows a vowel without any hiatus or difficulty of utterance, as *frogy winter*.

Wh has a sound accounted peculiar to the English, which the Saxons better expressed by *bq, bw*, as *what, whence, whiting*; in *wore* only, and sometimes in *whole, some, wh* is sounded like a simple *b*.

X.

X begins no English word; it has the sound of *as* as *axe, extraneous*.

Y.

Y, when it follows a consonant, is a vowel; when it precedes either a vowel or diphthong, is a consonant, *ye, young*. It is thought by some to be in all cases a vowel. But it may be observed of *y* as of *w*, that it follows a vowel without any hiatus, as *rosy youth*.

The chief argument by which *w* and *y* appear to be always vowels is, that the sounds which they are supposed to have as consonants, cannot be uttered after a vowel, like that of all other consonants; thus we say, *tu, ut; do, odd*; but in *wed, dew*, the two sounds of *w* have no resemblance to each other.

Z.

Z begins no word originally English; it has the sound, as its name *izzard* or *sharp* expresses, of an *s* uttered with closer compression of the palate by the tongue, as *freque, freeze*.

In orthography I have supposed, *orthoepey*, or *just utterance of words*, to be included; orthography being only the art of expressing certain sounds by proper characters. I have therefore observed in what words any of the letters are mute.

Most of the writers of English grammar have given long tables of words pronounced otherwise than they are written, and seem not sufficiently to have considered, that of English, as of all living tongues, there is a double pronunciation, one cursory and colloquial, the other regular and solemn. The cursory pronunciation is always vague and uncertain, being made different in different mouths by negligence, unskilfulness, or affecta-

tion. The solemn pronunciation, though by no means immutable and permanent, is yet always less remote from the orthography, and less liable to capricious innovation. They have however generally formed their tables according to the cursory speech of those with whom they happened to converse; and concluding that the whole nation combines to vitiate language in one manner, have often established the jargon of the lowest of the people as the model of speech.

For pronunciation the best general rule is, to consider those as the most elegant speakers who deviate least from the written words.

There have been many schemes offered for the emendation and settlement of our orthography, which, like that of other nations, being formed by chance, or according to the fancy of the earliest writers in rude ages, was at first very various and uncertain, and is yet sufficiently singular. Of these reformers some have endeavoured to accommodate orthography better to the pronunciation, without considering that this is to measure by a shadow, to take that for a model standard which is changing while they apply to it. Others, less absurdly indeed, but with equal unlikelihood of success, have endeavoured to proportion the number of letters to that of sounds, that every sound may have its own character, and every character a single sound. Such would be the orthography of a new language to be formed by a synod of grammarians upon principles of science. But who can hope to prevail on nations to change their practice, and make all their old books useless? or what advantage would a new orthography procure equivalent to the confusion and perplexity of such an alteration?

Some of these schemes I shall however exhibit, which may be used according to the diversity of genius, as a guide to reformers, or terror to innovators.

One of the first who proposed a scheme of regular orthography, was Sir Thomas Smith, secretary of state to Queen Elizabeth, a man of great learning, and much practised in grammatical acquisitions. Had he written the following according to his scheme, they would have appeared thus: as in *Plate CXXXVI*.

At length Erasmus, that great in

The glory of the priesthood, and

Stemm'd the wild torrent of a barbarous

And drove those holy Vandals off

After him another mode of writing was introduced by Dr Gill, the celebrated master of St Paul's school in London; which I cannot repeat exactly for want of types, but will approach as nearly as I can by means of characters now in use, so as to make it understood, exhibiting two stanzas of Spenser in the reformed orthography: *St. Plate CXXXVI. N° 1.*

Spenser, book iii. canto 5.

Unthankful wretch, said he, is this the meed
With which her sovereign mercy thou dost
quite?

Thy life the saved by her gracious deed;
But thou dost ween with villanous despite,
To blot her honour, and her heav'nly light.
Die, rather die, than so dishonourably,
Deem of her high desert, or seem so light.

Mr Tho^s Smith's Characters.

gð Zzafnau, gar gret insard nām,
i of the pūfāhūd, and be sām,
d be wald tōwēd of a bēd'zau ag
iv s'is hāli Vānāls of be sūg.

N^o. 2.D^r. Galls Characters.

ful wra, fāid hē, is kīs sē nūg,
to her sēdēmā mārī tōu dūf quē;
j fāid bē her grāfau ād,
dūf wēn wīb bīlēmā dīpī.
her hōmōr, and her hābūg līk.
er dē, sēn sō dīfōlāg,
to hūp dīfōlāg it bē.
her hūp dāzēt, or sūm sō līk.
it is to run mōr yām; sēn dē.
er dē, sēn sēb lūb dīfōlāg.

a hāt her hāt frōm dēfēd dūf
et' ah! fāz hē sūe rīpōr frōm mī.
a līes dū sēn her lūb dīfōlāg.
e dū rēwārd kārōt rēfōr?
er dē, and dīg dū her fērb,
fērb, and lībīg her ādā,
gāb, dē līf rē dūb dēzērb;
er dē, sēn sēb frōm her fērbīb fērb.

Dentalia.



Hobby.

N^o. 3.M^r. Butler's Characters.

Bot pōfōfōvēr yōu hāv' ēccāfōn to trābbel dēz pōfōfōr', or to cōm āmōng sēn
bēcīng trābbel, it is bēttēr to stānd upōn yōur gārd, sām to tōst tēir gārdēmā,
For bē fāf' gārd of yōur fāc'; pīo sēy hāv' mōd' mīnd' wāt, pōfōfōr' a pōfōfōr'
mād' of cōrle bōulēfōrīng, to bēz dāwā and knīt ābōut yōur cōllār, pīo fāz mōr
fāfōy is to bēz līnēd āgāīn s' ēmīnēt pārt wīth wōllēn clōt. Fīk cūt a pōt
ābōut ān īn; and ā hālf brōād, and hālf ā yārd lōng, to pōs rōund bē sē cōmples
and fōr' hēād, frōm ēnē yēz to bē ēbēr; pīo bōwīng fōwēd īn tīs plāc'; jōīn wāt
it tōwē pōt pōrtē of tē fām brōād; undēr bē ēy, fōr tē hālls of bē cōck, and
thēn lēt ān ēbēr pōt' ābōut bē brōād of ā rīllīng āgāīn tē tōp o bē nōfē. At
ēbēr tīm's, pōn sēy āt' nōt āngēd, ā lītēlē pīōt' hālf ā quārtēr brōād, to cōvēr bē
ēy and pārt ābōut thēm, mōy sērvē sōw; it bē īn tē hēāt of bē dāy. *Butler on the
Nature and Properties of Bees, 1634.*

N^o. 4.5 Bishop Wilkins's Characters.

Yur Fāthēr hāth ēt īn hēvēn, hāllōd bē dēyī nām dēyī crīstjīm cym, dēy wīll
bē dīn īn ēnē āt it is īn hēvēn, &c.

FALCO.

Gentle Falcon.



Eagle.



The Elk, Cervus Alces.



The Elk, Cervus Alces.

Fair death it is to shun more shame; then die.
Die, rather die, than ever love disloyally.

But if to love disloyalty it be,
Shall I then hate her, that from death's door
Me brought? ah! far be such reproach from me.
What can I less do, than her love therefore,
Sith I her due reward cannot restore?

Die, rather die, and dying do her serve,
Dying her serve, and living her adore.

Thy life she gave, thy life she doth deserve;
Die, rather die, than ever from her service swerve.

Dr Gill was followed by Charles Butler, a man
who did not want an understanding which might
have qualified him for better employment. He
seems to have been more sanguine than his prede-
cessors, for he printed his book according to his
own scheme; which the following specimen (See
Plate CXXXVI. N° 3.) will make easily under-
stood.

"But whensoever you have occasion to trouble
your patience, or to come among them being
troubled, it is better to stand upon your guard,
than to trust to their gentleness. For the safe-
guard of your face, which they have most mind
unto, provide a pursehood, made of coarse boul-
der, to be drawn and knit about your collar,
which for more safety is to be lined against the es-
sential parts with woollen cloth. First cut a piece
about an inch and a half broad, and half a yard
long, to reach round by the temples and fore-
head, from one ear to the other; which being
sewed in his place, join unto it two short pieces
of the same breadth under the eyes, for the balls
of the cheeks, and then set an other piece about
the breadth of a shilling against the top of the nose.
At other times, when they are not angered, a lit-
tle piece half a quarter broad, to cover the eyes
and parts about them, may serve though it be
in the heat of the day."

In the time of Charles I. there was a very pre-
valent inclination to change the orthography; as
appears, among other books, in such editions of
the works of Milton as were published by himself.
If these reformers every man had his own scheme;
but they agreed in one general design of accom-
modating the letters to the pronunciation, by ef-
fecting such as they thought superfluous. Some
of them would have written these lines thus: (as
in *Plate CXXXVI. N° 4.*)

—All the erth

Shall then be paradis, far happier place
Than this of Eden, and far happier dais.

Bishop Wilkins afterwards, in his great work
of the philosophical language, proposed, without
expecting to be followed, a regular orthography;
by which the Lord's prayer is to be written thus:
See *Plate CXXXVI. N° 5.*)

We have since had no general reformers; but
some ingenious men have endeavoured to deserve
well of their country, by writing *benor* and *labor*
for *honour* and *labour*, *red for read* in the preter-
tense, *fais for says*, *repets for repeat*, *explains for*
explain, or *declains for declaim*. Of these it may
be said, that as they have done no good, they
have done little harm; both because they have in-
novated little, and because few have followed
them.

The English language has properly no dialects;
the stile of writers has no professed diversity in
the use of words, or of their flexions, and termi-
nations, nor differs but by different degrees of skill
or care. The oral diction is uniform in no spaci-
ous country, but has less variation in England
than in most other nations of equal extent. The
language of the northern counties retains many
words now out of use, but which are commonly
of the genuine Teutonick race, and is uttered
with a pronunciation which now seems harsh and
rough, but was probably used by our ancestors.
The northern speech is therefore not barbarous
but obsolete. The speech in the western provin-
ces seem to differ from the general diction rather
by a depraved pronunciation, than by any real dif-
ference which letters would express.

ETYMOLOGY.

ETYMOLOGY teaches the deduction of one word
from another, and the various modifications by
which the sense of the same word is diversified;
as *horse*, *horses*; *I love*, *I loved*.

Of the ARTICLE.

The English have two articles, *an* or *a*, and *the*.

AN, A.

A has an indefinite signification, and means *one*,
with some reference to more; as, *This is a good*
book, that is, *one among the books that are good*.
He was killed by a sword, that is, *some sword*.
This is a better book for a man than a boy, that is,
for one of those that are men than one of those that
are boys. *An army might enter without resistance*,
that is *any army*.

In the senses in which we use *a* or *an* in the sin-
gular, we speak in the plural without an article;
as, *these are good books*.

I have made *an* the original article, because it
is only the Saxon *an*, or *æn*, *one*, applied to a
new use, as the German *ein*, and the French *un*;
the *n* being cut off before a consonant in the speed
of utterance.

Grammarians of the last age direct, that *an*
should be used before *b*; whence it appears that
the English anciently aspirated less. *An* is still used
before the silent *b*, as *an herd*, *an honest man*: but
otherwise *a*; as,

A horse, a horse, my kingdom for a horse.

Shakespeare.

An or *a* can only be joined with a singular, the
correspondent plural is the noun with an article,
as *I want a pen*, *I want pens*: or with the pronomi-
nal adjective *some*, as *I want some pens*.

THE has a particular and definite signification.

THE fruit

Of that forbidden tree, whose mortal taste
Brought death into the world.

Milton.

That is, *that particular fruit*, and *this world is*
which we live. So *He giveth fodder for the cattle*,
and green herbs for the use of man; that is, *for*
those things that are cattle, and *his use that is man*.

The is used in both numbers.

I am as free as Nature first made man,
Ere the base laws of servitude began,
When wild in woods the noble savage ran.

Dryd.

Many

Many words are used without articles; as,

1. Proper names, as *John, Alexander, Longinus, Aristarchus, Jerusalem, Athens, Rome, London*. God is used as a proper name.

2. Abstract names, as *blackness, witchcraft, virtue, vice, beauty, ugliness, love, hatred, anger, goodness, kindness*.

3. Words in which nothing but the mere being of any thing is implied: This is not *beer*, but *water*; This is not *brass*, but *steel*.

OF NOUNS SUBSTANTIVES.

The relations of English nouns to words going before or following are not expressed by *cases*, or changes of termination, but as in most of the other European languages by prepositions, unless we may be said to have a genitive case.

Singular.

Nom. Magister,	a Master, the Master.
Gen. Magistri,	of a Master, of the Master, or Masters, the Masters.
Dat. Magistro,	to a Master, to the Master.
Acc. Magistrum,	a Master, the Master.
Voc. Magister,	Master, O Master.
Abl. Magistro,	from a Master, from the Master.

Plural.

Nom. Magistri,	Masters, the Masters.
Gen. Magistrorum,	of Masters, of the Masters.
Dat. Magistris,	to Masters, to the Masters.
Acc. Magistros,	Masters, the Masters.
Voc. Magistri,	Masters, O Masters.
Abl. Magistris,	from Masters, from the Masters.

Our nouns are therefore only declined thus:
 Master, Gen. Masters. Plur. Masters.
 Scholar, Gen. Scholars. Plur. Scholars.

These genitives are always written with a mark of ellipsis, *master's, scholar's*, according to an opinion long received, that the *'s* is a contraction of *his*, as the *soldier's valour*, for the *soldier his valour*: but this cannot be the true original, because *'s* is put to female nouns, *Woman's beauty*; the *Virgin's delicacy*; *Laurel's Juno's unrelenting hate*; and collective nouns, as *Women's passions*, the *rabble's insolence*; the *multitude's folly*; in all these cases it is apparent that *his* cannot be understood. We say likewise, *the foundation's strength*, *the diamond's lustre*, *the winter's severity*; but in these cases *his* may be understood, *he* and *his* having formerly been applied to neutrals in the place now supplied by *it* and *its*.

The learned and sagacious Wallis, to whom every English grammarian owes a tribute of reverence, calls this modification of the noun an *adjective possessive*; I think with more propriety that he might have applied the same to the genitive in *equum decus*, *Troja oris*, or any other Latin genitive. Dr Lowth, on the other part, supposes the possessive pronouns *mine* and *thine* to be genitive cases.

This termination of the noun seems to constitute a real genitive indicating possession. It is derived to us from those who declined *smith, a smith*; Gen. *smiths, of a smith*; Plur. *smiths, or smiths, smiths*; and so in two other of their seven declensions.

It is a further confirmation of this opinion, that in the old poets both the genitive and plural were longer by a syllable than the original word; *knin*, for *knights*; in Chaucer; *leavis*, for *leaves*, in Spenser.

When a word ends in *s*, the genitive may be the same with the nominative, as *Venus temple*.

The plural is formed by adding *s*, *table, tables*; *fly, flies*; *sister, sisters*; *wood, woods*; or *es* where *s* could not otherwise be sounded, as after *ch*, *sh*, *x*, *z*; after *c* sounded like *s*, and *g* like *j*; the mute *e* is vocal before *s*, as *lance, lances*; *outrage, outrages*.

The formation of the plural and genitive singular is the same.

A few words yet make the plural in *n*, as *men, women, oxen, faine*, and more anciently *eyes and shoon*. This formation is that which generally prevails in the Teutonic dialects.

Words that end in *f* commonly form their plural by *ves*, as *leaf, leaves*; *calf, calves*.

Except a few, *maff, muffs*; *chiefs, chiefs*. So *boof, roof, proof, relief, mischief, puff, cuff, dwarf, handkerchief, grief*.

Irregular plurals are *teeth* from *tooth*, *ice* from *loose*, *mice* from *mouse*, *geese* from *goose*, *fat* from *foot*, *dice* from *die*, *peace* from *penny*, *brethren* from *brother*, *children* from *child*.

Plurals ending in *s* have for the most part no genitives; but we say *Women's excellencies*, and *Weigh the mens wits against the ladies hair*. Pope.

Dr Wallis thinks the *Lords' house* may be said for the *house of Lords*; but such phrases are not now in use; and surely an English ear rebels against them. They would commonly produce a troublesome ambiguity, as the *Lords' house* may be the *house of Lords*, or the *house of a Lord*. Besides that the mark of ellipsis is improper, for as the *Lords' house* nothing is cut off.

Some English substantives, like those of many other languages, change their termination as they express different sexes, as *prince, princess*; *actor, actress*; *lion, lioness*; *hero, heroine*. To the mentioned by Dr Lowth may be added *archer, poetess, chautress, duckess, tigress, governess, mistress, peeress, authoress, traytruss*, and perhaps others. Of these variable terminations we have only a sufficient number to make us feel our want; for when we say of a woman that she is a *philosopher*, an *astronomer*, a *builder*, a *weaver*, a *dentist*, we perceive an impropriety in the termination which we cannot avoid; but we can say that she is an *architect*, a *botanist*, a *student*, because these terminations have not annexed to them the notion of sex. In words which the necessities of sex are often requiring, the sex is distinguished not by different terminations but by different names, as a *bull*, a *cow*; a *horse*, a *mare*; *equus*, *equa*; a *hen*; and sometimes by pronouns prefixed, as a *he-goat*, a *she-goat*.

OF ADJECTIVES.

Adjectives in the English language are wholly indeclinable; having neither case, gender, nor number, and being added to substantives in all relations, without any change; as, a good woman.

*d women; of a good woman; a good man, good
s, of good men.*

The Comparison of Adjectives.

The comparative degree of adjectives is formed adding *er*, the superlative by adding *est*, to the
itive; as *fair*, fairer, fairest; *lovely*, lovelier,
eldest; *sweet*, sweeter, sweetest; *low*, lower,
est; *high*, higher, highest.

Some words are irregularly compared; as *good*,
ter, best; *bad*, worse, worst; *little*, less, least;
ir, nearer, next; *much*, more, most; *many* (or
e), more (for *moer*), most (for *moest*); *late*, later,
est or last.

Some comparatives form a superlative by ad-
ing *most*, as *netter*, nettermost; *outer*, outermost;
der, undermost; *up*, upper, uppermost; *fore*, for-
er, foremost.

Most is sometimes added to a substantive, as *top-
most*, southmost.

Many adjectives do not admit of comparison
terminations, and are only compared by *more*
d *most*, as *benevolent*, more *benevolent*, most *be-
nevolent*.

All adjectives may be compared by *more* and
est, even when they have comparatives and su-
perlatives regularly formed; as *fair*, fairer; or
ore *fair*; *fairest*, or *most fair*.

In adjectives that admit a regular comparison,
e comparative *more* is oftener used than the su-
perlative *most*, as *more fair* is oftener written for
irer, than *most fair* for *fairest*.

The comparison of adjectives is very uncertain;
nd being much regulated by commodiousness of
iteration, or agreeableness of sound, is not easily
duced to rules.

Monosyllables are commonly compared.

Polysyllables, or words of more than two syl-
ables, are seldom compared otherwise than by
ore and *most*, as *deplorable*, more *deplorable*, *most
deplorable*.

Disyllables are seldom compared if they termi-
nate in *some*, as *false*, false; in *ful*, as *carr-
id*, spleenful, dreadful; in *ing*, as *trifling*, charm-
ing; in *ous*, as *porous*; in *less*, as *careless*, harm-
less; in *ed*, as *wretched*; in *id*, as *candid*; in *al*,
as *mortal*; in *ent*, as *recent*, fervent; in *ain*, as
ertain; in *ive*, as *missive*; in *dy*, as *woody*; in *fy*,
as *puffy*; in *ky*, as *rocky*; except *lucky*; in *my*, as
omy; in *ny*, as *skinny*; in *py*, as *ropy*, except *hap-
py*; in *ry*, as *boary*.

Some comparatives and superlatives are yet
ound in good writers formed without regard to
se foregoing rules: but in a language subjected to
tle and so lately to grammar, such anomalies must
requently occur. *So/bady* is compared by *Milton*—

She in *baddest* covert hid,

Par. Lost.

Tun'd her nocturnal note.
und *virtuous*.

What she wills to say or do,

Seems wisest, *virtuous*, discreetest, best.

Paradise Lost.

o *trifling*, by *Ray*, who is indeed of no great au-
thority.—It is not so decorous, in respect of God,
hat he should immediately do all the meanest
nd *trifling* things himself, without making use
f any inferior or subordinate minister. *Ray on the
creation. Famous, by Milton*—

I shall be named among the *famous*
Of women, sung at solemn festivals.

Milton's Agonistes.

Inventive, by *Ajebam*.—Those have the *inven-
tive* heads for all purposes, and roundest tongues
in all matters. *Ajebam's Schoolmaster. Mortal*,
by *Bacon*.—The *mortalest* poisons practised by the
West Indians, have some mixture of the blood,
fat, or flesh of man. *Bacon. Natural*, by *Wot-
ton*.—I will now deliver a few of the properest
and *naturallest* considerations that belong to this
piece. *Wotton's Architecture. Wretched*, by *Jon-
son*.—The *wretched* are the contemners of all
helps; such as presuming on their own naturals,
deride diligence, and mock at terms when they
understand not things. *Ben Jonson. Powerful*, by
Milton.

We have sustain'd one day in doubtful fight,
What heav'n's great King hath pow'rfullest to send
Against us from about his throne. *Par. Lost.*

The termination in *ib* may be accounted in
some sort a degree of comparison, by which the
signification is diminished below the positive, as
black, *blackib*, or tending to blackness; *salt*, *salt-
ib*, or having a little taste of salt: they therefore
admit no comparison. This termination is seldom
added but to words expressing sensible qualities,
nor often to words of above one syllable, and is
scarcely used in the solemn or sublime style.

Of PRONOUNS.

Pronouns, in the English language are, *I*, *thou*,
be, with their plurals *we*, *ye*, *they*; *it*, *who*, *which*,
what, *whether*, *whosoever*, *whatsoever*, *my*, *mine*,
our, *ours*, *thy*, *thine*, *your*, *yours*, *her*, *hers*, *their*,
theirs, *this*, *that*, *other*, *another*, *the same*, *some*.

The pronouns personal are irregularly inflected.

	Singular.	Plural.
Nom.	I	We
Accus. and other oblique cases.	Me	Us
Nom.	Thou	Ye
Oblique.	Thee	You

You is commonly used in modern writers for *ye*,
particularly in the language of ceremony, where
the second person plural is used for the second
person singular, *You are my friend*.

	Singular.	Plural.	
Nom.	He	They	Applied to mascu- lines.
Oblique.	Him	Them	
Nom.	She	They	Applied to femi- nines.
Oblique.	Her	Them	
Nom.	It	They	Applied to neuters or things.
Oblique.	Its	Them	

For is the practice of ancient writers was to use
be, and for *its*, *his*.

The possessive pronouns, like other adjectives,
are without cases or change of termination.

The possessive of the first person is *my*, *mine*,
our, *ours*; of the second, *thy*, *thine*, *you*, *yours*; of
the third, from *be*, *his*, from *she*, *her*, and *hers*,
and in the plural *their*, *theirs*, for both sexes.

Our, *yours*, *hers*, *theirs*, are used when the sub-
stantive preceding is separated by a verb, as *These
are our books. These books are ours. Your child-
ren excel ours in stature, but ours surpass yours in
learning*.

Ours, yours, hers, theirs, notwithstanding their seeming plural termination, are applied equally to singular and plural substantives, as *This book is ours. These books are ours.*

Mine and *thine* were formerly used before a vowel, as *mine amiable lady*; which though now disused in prose, might be still properly continued in poetry, they are used as *ours* and *yours*, and are referred to a substantive preceding, as, *thy house is larger than mine*, but *my garden* is more spacious than *thine*.

Their and *theirs* are the possessives likewise of *they*, when *they* is the plural of *it*, and are therefore applied to things.

Pronouns relative are, *who, which, what, whether, whatsoever, whatsoever*.

Sing.		Sing. and Plur.	
Nom.	Who	Nom.	Which
Gen.	Whose	Gen.	Of which, or whose
Other oblique cases.	Whom	Other oblique cases.	Which

Who is now used in relation to persons, and *which* in relation to things; but they were anciently confounded. At least it was common to say, the man *which*, though I remember no example of, the thing *who*.

Whose is rather the poetical than regular genitive of *which*:

The fruit

Of that forbidden tree, *whose* mortal taste

Brought death into the world. *Milton,*

Whether is only used in the nominative and accusative cases; and has no plural, being applied only to one of a number, commonly to one or two, as, *Whether of these is left I know not. Whether shall I choose?* It is now almost obsolete.

What, whether relative or interrogative, is without variation.

Whosoever, whatsoever, being compounded of *who* or *what*, and *soever*, follow the rule of their primitives.

In all cases,	Singular.	Plural.
	This	These
	That	Those
	Other	Others
	Whether	

The plural *others* is not used but when it is referred to a substantive preceding, as *I have sent other horses. I have not sent the same horses, but others.*

Another, being only an *other*, has no plural.

Here, there, and where, joined with certain particles, have a relative and pronominal use. *Hereof, herein, hereby, hereafter, herewith, thereof, therein, thereby, thereupon, therewith, whereof, whereon, whereby, whereupon, wherewith*, which signify, of this, in this, &c. of that, in that, &c. of which, in this, &c.

Therefore and *wherefore*, which are properly, *there for* and *where for*, for *that*, for *which*, are now reckoned conjunctions, and continued in use. The rest seem to be passing by degrees into neglect, though proper, useful, and analogous. They are referred both to singular and plural antecedents.

There are two more words used only in conjunction with pronouns, *own* and *self*.

Own is added to possessives, both singular and

plural, as *my own hand, our own house*. It is emphatical, and implies a silent contrariety or opposition; as *I live in my own house*, that is, *in a hired house. This I did with my own hand*, *he is, without help, or not by proxy.*

Self is added to possessives, as *myself, yourself*, and sometimes to personal pronouns, as *himself, itself, themselves*. It then, like *own*, expresses emphasis and opposition as *I did this myself*, that is, *not another*; or it forms a reciprocal pronoun, as *We hurt ourselves by vain rage.*

Himself, itself, themselves, is supposed by Wallis to be put by corruption, for *his self, it self, their selves*; so that *self* is always a substantive. This seems justly observed, for we say, *He can himself; Himself shall do this*; where *himself* can not be an accusative.

Of the VERB.

English verbs are active, as *I love*; or neuter, as *I languish*. The neuters are formed like the actives.

Most verbs signifying *action* may likewise signify *condition* or *habit*, and become *neuters*, as *I love*, I am in love; *I strike*, I am now striking.

Verbs have only two tenses inflected in their terminations, the present, and simple preterite; the other tenses are compounded of the auxiliary verbs *have, shall, will, let, may, can*, and the infinitive of the active or neuter verb.

The passive voice is formed by joining the participle preterite to the substantive verb, as *I am loved*.

To have. Indicative Mood.

Present Tense.

Sing. I have; thou hast; he hath or has;

Plur. We have; ye have; they have.

Has is a termination corrupted from *hath*, but now more frequently used both in verse and prose.

Simple Preterite.

Sing. I had; thou hadst; he had;

Plur. We had; ye had; they had.

Compound Preterite.

Sing. I have had; thou hast had; he has or hath had;

Plur. We have had; ye have had; they have had.

Preterplusperfect.

Sing. I had had; thou hadst had; he had had;

Plur. We had had; ye had had; they had had.

Future.

Sing. I shall have; thou shalt have; he shall have;

Plur. We shall have; ye shall have; they shall have.

Second Future.

Sing. I will have; thou wilt have; he will have;

Plur. We will have; ye will have; they will have.

By reading these future tenses may be observed the variations of *shall* and *will*.

Imperative Mood.

Sing. Have, or have thou; let him have;

Plur. Let us have; have, or have ye; let them have.

Conjunctive Mood.

Present.

Sing. I have; thou have; he have;

Plur. We have; ye have; they have.

Preterite simple as in the Indicative.

Preterite compound.

Sing. I have had; thou have had; he have had;

Plur. We have had; ye have had; they have had.

Future.

g. I shall have; as in the Indicative.

Second Future.

g. I shall have had; thou shalt have had; he shall have had;

w. We shall have had; ye shall have had; they shall have had.

Potential.

The potential form of speaking is expressed by *is, can, in the present; and might, could, or would, in the preterite, joined with the infinitive* of the verb.

Present.

g. I may have; thou mayest have; he may have;

w. We may have; ye may have; they may have.

Preterite.

g. I might have; thou mightst have; he might have;

w. We might have; ye might have; they might have.

Present.

g. I can have; thou canst have; he can have;

w. We can have; ye can have; they can have.

Preterite.

g. I could have; thou couldst have; he could have;

w. We could have; ye could have; they could have.

In like manner *should* is united to the verb.

There is likewise a double *Preterite*.

g. I should have had; thou shouldst have had; he should have had.

w. We should have had; ye should have had; they should have had.

In like manner we use, *I might have had; I would have had, &c.*

Infinitive Mood.

Present. To have. *Preterite.* To have had.

Participle present. Having. *Participle preter.* Had.

*Verb Active. To Love.**Indicative. Present.*

g. I love; thou lovest; he loveth, or loves;

w. We love; ye love; they love.

Preterite simple.

g. I loved; thou lovedst; he loved;

w. We loved; ye loved; they loved.

Preterperfect compound. I have loved, &c.

Preterpluperfect. I have loved, &c.

Future. I shall love, &c. I will love, &c.

Imperative.

g. Love, or love thou; let him love;

w. Let us love; love, or love ye; let them love.

Conjunctive. Present.

g. I love; thou love; he love;

w. We love; ye love; they love.

Preterite simple, as in the Indicative.

Preterite compound. I have loved, &c.

Future. I shall love, &c.

Second Future. I shall have loved, &c.

Potential.

Present. I may or can love, &c.

Preterite. I might, could, or should love, &c.

Double Pres. I might, could, or should have loved, &c.

Infinitive.

Present. To love. *Preterite.* To have loved, &c.

Participle present. Loving. *Participle past.* Loved.

The passive is formed by the addition of the participle preterite, to the different tenses of the verb *to be*, which must therefore be here exhibited.

Indicative. Present.

Sing. I am; thou art; he is;

Plur. We are, or be; ye are, or be; they are, or be.

The plural *be* is now little in use.

Preterite.

Sing. I was; thou wast or wert; he was;

Plur. We were; ye were; they were.

Wert is properly of the conjunctive mood, and ought not be used in the indicative.

Preterite compound. I have been, &c.

Preterpluperfect. I had been, &c.

Future. I shall or will be, &c.

Imperative.

Sing. Be thou; let him be;

Plur. Let us be; be ye; let them be.

Conjunctive. Present.

Sing. I be; thou beest; he be;

Plur. We be; ye be; they be.

Preterite.

Sing. I were; thou wert; he were;

Plur. We were; ye were; they were.

Preterite compound. I have been, &c.

Future. I shall have been, &c.

Potential.

I may or can; would, could, or should be; could, would, or should have been, &c.

Infinitive.

Present. To be.

Preterite. To have been.

Participle pres. Being. Participle preter. Having been.

Passive Voice. Indicative Mood.

I am loved, &c. I was loved, &c. I have been loved, &c.

Conjunctive Mood.

If I be loved, &c. If I were loved, &c. If I shall have been loved, &c.

Potential Mood.

I may or can be loved, &c. I might, could, or should be loved, &c. I might, could, or should have been loved, &c.

Infinitive.

Present. To be loved. *Preterite.* To have been loved.

Participle. Loved.

There is another form of English verbs, in which the infinitive mood is joined to the verb *do* in its various inflections, which are therefore to be learned in this place.

*To Do.**Indicative. Present.*

Sing. I do; thou dost; he doth;

Plur. We do; ye do; they do.

Preterite.

Sing. I did; thou didst; he did;

Plur. We did; ye did; they did

Preterite, &c. I have done, &c. I had done, &c.

Future. I shall or will do, &c.

Imperative.

Sing. Do thou; let him do;

Plur. Let us do; do ye; let them do;

Conjunctive. Present.

Sing. I do; thou do; he do;

Plur. We do; ye do; they do.

The rest are as in the Indicative.

Infinitive. To do; to have done.

Participle pres. Doing. Participle preter. Done.

Do

Do is sometimes used superfluously, as *I do love*, *I did love*; simply for *I love*, or *I loved*; but this is considered as a vitious mode of speech.

It is sometimes used emphatically; as,
I do love thee, and when I love thee not,
Cbaos is come again. Shakspeare.

It is frequently joined with a negative; as *I like her*, but *I do not love her*; *I wished him success*, but *did not help him*. This, by custom at least, appears more easy, than the other form of expressing the same sense by a negative adverb after the verb, *I like her*, but *love her not*.

The Imperative prohibitory is seldom applied in the second person, at least in prose, without the word *do*; as, *Stop him*, but *do not hurt him*; *Praise beauty* but *do not dote on it*.

Its chief use is in interrogative forms of speech, in which it is used through all the persons; as, *Do I live?* *Dost thou strike me?* *Do they rebel?* *Did I complain?* *Didst thou love her?* *Did she die?* So likewise in negative interrogations; *Do I not yet grieve?* *Did she not die?*

Do and *did* are thus used only for the present and simple preterite.

There is another manner of conjugating neuter verbs, which, when it is used, may not improperly denominate them *neuter passives*, as they are inflected according to the passive form by the help of the verb substantive to *be*. They answer nearly to the reciprocal verbs in French; as, *I am risen*, *surrexi*, Latin; *Je me suis levé*, French. *I was walked out*, *exieram*; *Je m'étois promène*.

In like manner we commonly express the present tense; as, *I am going*, *eo*. *I am grieving*, *doleo*. She is dying, *illa moritur*. The tempest is raging, *furit procella*. *I am pursuing an enemy*, *hostem insequor*. So the other tenses, as, *We were awalking*, *εωχρηματιζαμεθα*, *I have been awalking*, *I had been awalking*, *I shall or will be awalking*.

There is another manner of using the active participle, which gives it a passive signification; as, The grammar is now printing, *grammatica jam nunc chartis imprimitur*. The bras is forging, *era excuduntur*. This is, in my opinion, a vitious expression, probably corrupted from a phrase more pure, but now somewhat obsolete: *The book is a printing*, *The bras is a forging*; a being properly *at*, and *printing* and *forging* verbal nouns signifying action, according to the analogy of this language.

The indicative and conjunctive moods are by modern writers frequently confounded, or rather the conjunctive is wholly neglected, when some convenience of versification does not invite its revival. It is used among the purer writers of former times after *if*, *though*, *ere*, *before*, *till* &c. *until*, *whether*, *except*, *unless*, *whatsoever*, *whomsoever*, and words of wishing; as *Doubtless thou art our father*, though *Abraham be ignorant of us*, and *Israel acknowledge us not*.

OF IRREGULAR VERBS.

The English verbs were divided by Ben Jonson into four conjugations, without any reason arising from the nature of the language, which has properly but one conjugation, such as has been exemplified; from which all deviations are to be

considered as anomalies; which are indeed in our monosyllable Saxon verbs, and the verbs derived from them, very frequent; but almost all the verbs which have been adopted from other languages, follow the regular form.

Our verbs are observed by Dr Wallis to be a regular only in the formation of the preterite, and its participle. Indeed, in the scantiness of our conjugations, there is scarcely any other place of irregularity.

The first irregularity, is a slight deviation from the regular form, by rapid utterance or partial contraction: the last syllable *ed* is often joined with the former by suppression of *e*; as *loved* in *loved*; after *c*, *ch*, *sh*, *f*, *k*, *x*, and after the consonants, *s*, *th*, when more strongly pronounced, and sometimes after *m*, *n*, *r*, if preceded by a short vowel, *t* is used in pronunciation, but very seldom in writing, rather than *d*; as *plac't*, *just't*, *fish't*, *wak't*, *dawel't*, *smel't*; for *plac'd*, *just'd*, *fish'd*, *wak'd*, *dawel'd*, *smel'd*; or *plac'd*, *just'd*, *fish'd*, *wak'd*, *dawel'd*, *smel'd*.

Those words which terminate in *l*, or *ll*, *x*, *p*, make their preterite in *t*, even in solemn language; as *crept*, *felt*, *dwelt*, sometimes after *s*, *d* is changed into *t*; as *went*: this is not constant.

A long vowel is often changed into a short one; thus, *kept*, *slept*, *except*, *crept*, *subt*; but the verbs to *keep*, to *sleep*, to *except*, to *subt*, *swamp*.

Where *d* or *t* go before, the additional letter *r* or *t*, in this contracted form, coalesce into one letter with the radical *d* or *t*: if *t* were the radical, they coalesce into *t*; but if *d* were the radical, then into *d* or *t*, as the one or the other letter may be more easily pronounced: as, *read*, *led*, *spread*, *shed*, *spread*, *bid*, *bid*, *chide*, *fed*, *hid*, *trid*, *sped*, *frid*, *rid*; from the verbs to *read*, to *lead*, to *spread*, to *shed*, to *spread*, to *bid*, to *chide*, to *chide*, to *feed*, to *bleed*, to *breed*, to *speed*, to *tride*, to *slide*, to *ride*. And thus, *cast*, *burst*, *cast*, *burst*, *eat*, *beat*, *sweat*, *fit*, *quit*, *smite*, *writ*, *hit*, *met*, *shot*; from the verbs, to *cast*, to *burst*, to *cast*, to *burst*, to *eat*, to *beat*, to *sweat*, to *fit*, to *quit*, to *smite*, to *write*, to *bite*, to *bite*, to *hit*, to *meet*, to *shoot*. And in like manner, *lent*, *stint*, *rest*, *put*, from the verbs, to *lend*, to *lend*, to *rest*, to *rest*.

The participle preterite or passive is often formed in *en*, instead of *ed*; as *been*, *taken*, *grown*, *lain*, *known*; from the verbs, to *be*, to *take*, to *grow*, to *lay*, to *know*.

Many words have two or more participles, not only *written*, *bitten*, *eaten*, *beaten*, *hidden*, *chidden*, *shotten*, *chofen*, *broken*; but *licked*, *writ*, *bit*, *eat*, *beat*, *hid*, *chid*, *shot*, *chof*, *brun*, are promiscuously used in the participle, from the verbs to *write*, to *bite*, to *eat*, to *beat*, to *hide*, to *chide*, to *shoot*, to *chof*, to *break*, and many such like.

In the same manner *foven*, *strown*, *beown*, *mow'd*, *loaden*, *laden*, as well as, *fove'd*, *strow'd*, *beow'd*, *mow'd*, *loaden*, *laden*, from the verbs to *fove*, to *strow*, to *beow*, to *mow*, to *load*, or *lade*.

Concerning these double participles it is difficult to give any rule; but he shall seldom err who remembers, that when a verb has a participle distinct from its preterite, as *write*, *written*, *writ*, that distinct participle is more proper and elegant.

as *The book is written*, is better than *The book is wrote*. *Wrote* however may be used in poetry; at least if we allow any authority to poets, who, in the exultation of genius, think themselves perhaps intitled to trample on grammarians.

There are other anomalies in the preterite.

1. *Win, spin, begin, swim, strike, sick, sing, ring, sling, ring, swing, spring, saving, drink, sink, shrink, slink, come, run, find, bind, grind, wind*, both in the preterite, imperfect, and participle passive, give *won, spun, begun, swum, struck, stuck, sung, slung, sung, rung, swung, sprung, swung, drunk, sunk, shrunk, slunk, come, run, found, bound, ground, wound*. And most of them are also formed in the preterite by *a* as *began, sang, sang, sprang, drank, came, ran*, and some others; but most of these are now obsolete. Some in the participle passive likewise take *en*, as *stricken, stricken, drunken, bounden*.

2. *Fight, teach, reach, seek, beseech, catch, buy, bring, think, work, make fought, taught, sought, bought, besought, caught, brought, thought, wrought*.

But a great many of these retain likewise the regular form, as *taached, reached, beseeched, catch'd, worked*.

3. *Take, shake, forsake, wake, awake, stand, break, speak, bear, shear, swear, tear, weave, leave, strive, thrive, drive, shine, rise, arise, smite, write, bide, abide, ride, choose, chuse, tread, get, forget, forget, see, make both preterite and participle took, shook, forsook, woke, awoke, stood, broke, spoke, bore, shore, swore, tore, wore, wove, love, drove, thrive, drove, shone, rose, arose, moie, wrote, bode, abode, rode, chose, rode, got, forgot, forgot, sod*. But we say likewise, *thrive, rise, smit, writ, abid, rid*. In the preterite some are likewise formed by *a*, as *brake, spake, bare, bare, aware, tare, ware, clare, gat, begat, forat*, and perhaps some others, but more rarely. In the participle passive are many of them formed by *en*, as *taken, shaken, forsaken, broken, spoken, born, sporn, sworn, torn, worn, woven, cloven, thriven, driven; risen, smitten, ridden, chotten, trodden, gotten, begotten, forgotten, sodden*. And many do likewise retain the analogy in both, as *awaked, awaked, sheared, weaved, leaved, aided, feeded*.

4. *Give, bid, sit, make* in the preterite *gave, ade, sate*; in the participle passive, *given, bidden, sitten*; but in both *bid*.

5. *Draw, know, grow, throw, blow, crow* like a cock, *fly, slay, see, ly*, make their preterite *drew, knew, grew, threw, blew, crew, flew, saw, lay*; their participles passive by *n*, *drawn, known, grown, thrown, blown, flown, lain, seen, lien, lain*. Yet from *see* is made *saw*; from *go*, *went*, from the old *wend*, the participle *went*.

OF DERIVATION.

That the English language may be more easily understood, it is necessary to enquire how its derivative words are deduced from their primitives, and how the primitives are borrowed from other languages. In this enquiry I shall sometimes copy Dr Wallis, and sometimes endeavour to supply his defects, and rectify his errors.

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Nouns are derived from verbs.

The thing implied in the verb as done or produced, is commonly either the present of the verb; as, to love, *love*; to fright, *a fright*; to fight *a fight*; or the preterite of the verb, as, to strike, *I struck, or strook, a stroke*.

The action is the same with the participle present, as *loving, frightening, fighting, striking*.

The agent, or person acting, is denoted by the syllable *er* added to the verb, as *lover, frighter, striker*.

Substantives, adjectives, and sometimes other parts of speech, are changed into verbs: in which case the vowel is often lengthened, or the consonant softened; as a house, *to house*; brass, *to brase*; glass, *to glaze*; grass, *to graze*; price, *to prize*; breath, *to breathe*; a fish, *to fish*; oyl, *to oyl*; further, *to further*; forward, *to forward*; hinder, *to hinder*.

Sometimes the termination *en* is added, especially to adjectives; as, haste, *to hasten*; length, *to lengthen*; strength, *to strengthen*; short, *to shorten*; fast, *to fasten*; white, *to whiten*; black, *to blacken*; hard, *to harden*; soft, *to soften*.

From substantives are formed adjectives of plenty, by adding the termination *y*; as, a louse, *lousy*; wealth, *wealthy*; health, *healthy*; night, *mighty*; worth, *worthy*; wit, *witty*; lust, *lustily*; water, *watery*; earth, *earthy*; wood, *a woody*; air, *airy*; a heart, *heartily*; a hand, *handy*.

From substantives are formed adjectives of plenty, by adding the termination *ful*, denoting abundance; as, joy, *joyful*; fruit, *fruitful*; youth, *youthful*; care, *careful*; use, *useful*; delight, *delightful*; plenty, *plentiful*; help, *helpful*.

Sometimes, in almost the same sense, but with some kind of diminution thereof, the termination *some* is added, denoting *something*, or *in some degree*; as, delight, *delightfulsome*; game, *gamesome*; irk, *irksome*; burden, *burdensome*; trouble, *troublesome*; light, *lightsome*; hand, *handsome*; alone, *lonesome*; toil, *toilsome*.

On the contrary, the termination *less* added to substantives, makes adjectives signify want; as *worthless, witless, heartless, joyless, careless, helpless*. Thus *comfort, comfortable*; sap, *sapless*.

Privation or contrariety is very often denoted by the particle *un* prefixed to many adjectives, or in before words derived from the Latin; as, pleasant, *unpleasant*; wife, *unwise*; profitable, *unprofitable*; patient, *impatient*. Thus *unworthy, unhealthy, unfruitful, unuseful*, and many more.

The original English privative is *un*; but as we often borrow from the Latin, or its descendants, words already signifying privation, as *ineffectual, impious, indiscreet*, the inseparable particles *un* and *in* have fallen into confusion, from which it is not easy to disentangle them.

Un is prefixed to all words originally English; as *untrue, untruth, untaught, unhandsome*.

Un is prefixed to all participles made privative adjectives, as *unfeeling, unassisting, unaided, undelighted, unendeared*.

Un ought never to be prefixed to a participle present, to mark a forbearance of action, as *unfighting*; but a privation of habit, as *unpitying*.

Un is prefixed to most substantives which have an English termination, as *unfertility, unper-*

Ttt

fecundity, which, if they have borrowed termination, take in or into, as *infertility*, *improvement*; *uncivil*, *incivility*; *unactive*, *inactivity*.

In borrowing adjectives, if we receive them already compounded, it is usual to retain the particle prefixed, as *indecent*, *inelegant*, *improper*; but if we borrow the adjective, and add the privative particle, we commonly prefix *un*, as *unpolite*, *ungallant*.

The prepositive particles *dis* and *mis*, derived from the *des* and *mes* of the French, signify almost the same as *un*; yet *dis* rather imports contrariety than privation, since it answers to the Latin preposition *de*. *Mis* insinuates some error, and for the most part may be rendered by the Latin words *male* or *perperam*. To like, to *dislike*; honour, *dishonour*; to honour, to *grace*, to *dishonour*, to *disgrace*, to *deign*, to *disdeign*; chance, hap, *mischance*, *mishap*; to take, to *mistake*; deed, *misdeed*; to use, to *misuse*; to employ, to *misemploy*; to apply, to *misapply*.

Words derived from Latin written with *de* or *dis* retain the same signification, as *distinguish*, *distinct*; *detra*, *detraho*; *desame*, *desamo*; *detain*, *detineo*.

The termination *ly* added to substantives, and sometimes to adjectives, forms adjectives that import some kind of similitude or agreement, being formed by contraction of *like* or *like*.

A giant, *giantly*, *giantlike*; earth, *earthly*; heaven, *heavenly*; world, *worldly*; God, *godly*; good, *goodly*.

The same termination *ly* added to adjectives, forms adverbs of like signification; as beautiful, *beautifully*; sweet, *sweetly*; that is, in a beautiful manner; with some degree of sweetness.

The termination *ish* added to adjectives, imports diminution; and added to substantives, imports similitude or tendency to a character; as, green, *greenish*; white, *whitish*; soft, *softish*; a thief, *thievish*; a wolf, *wolfish*; a child, *childish*.

We have forms of diminutives in substantives, though not frequent; as, a bill, a *billock*; a cock, a *cockrel*; a pike, *pickrel*; this is a French termination: a goose, a *gosling*; this is a German termination: a lamb, a *lambkin*; a chick, a *chicken*; a man, a *manikin*; a pipe, a *pipkin*; and thus *Halkin*, whence the patronimick *Hawkins*; *Wilkin*, *Tbomkin*, and others.

Yet still there is another form of diminution among the English, by lessening the sound itself, especially of vowels: as there is a form of augmenting them by enlarging, or even lengthening it; and that sometimes not so much by change of the letters, as of their pronunciation; as *sup*, *sip*, *soop*, *sop*, *sippet*, where, besides the extension of the vowel, there is added the French termination *et*; *top*, *tip*, *spit*, *spout*; *babe*, *baby*, *booby*, *berry*; great pronounced long, especially if with a stronger sound, *grea-t*; little pronounced long, *lee-tle*; *ting*, *tang*, *tong*, imports a succession of smaller and then greater sounds; and so in *jingle*, *jangle*, *tingle*, *tangle*, and many other made words.

Much however of this is arbitrary and fanciful, depending wholly on oral utterance, and therefore scarcely worthy the notice of *Wallis*.

Of concrete adjectives are made abstract substantives, by adding the termination *ness*, and a few in *hood* or *head*, noting character or qualities; as, white, *whiteness*; hard, *hardness*; great, *greatness*; skilful, *skilfulness*, *unskilfulness*; good, *goodness*, *manhood*, *maidenhead*, *widowhood*, *knighthood*, *priesthood*, *likeness*, *falsehood*.

There are other abstracts, partly derived from adjectives, and partly from verbs, which are formed by the addition of the termination *th*, a small change being sometimes made; as, long, *length*; strong, *strength*; broad, *breadth*; wide, *width*; deep, *depth*; true, *truth*; warm, *warmth*; dear, *dearth*; slow, *slowness*; merry, *mirth*; healthy, *health*; well, *weal*, *wealth*; dry, *draught*; young, *youth*; and so moon, *month*.

Like these are some words derived from verbs; dy, *death*; till, *tilth*; grow, *growth*; mow, *harvest*, *mowth*; after *mowth*; commonly spoken and written later *math*, after *math*; steal, *theft*; bear, *birth*; rue, *rueth*; and probably *carth* from *to ear* or *plow*; fly, *flight*; weigh, *weight*; fear, *fright*; to draw, *draught*.

These should rather be written *flight*, *fright*, only that custom will not suffer *b* to be twice repeated.

The same form retain *faith*, *spight*, *curath*, *curath*, *broth*, *froth*, *breath*, *foath*, *worth*, *light*, *weight*; and the like, whose primitives are now entirely obsolete, or seldom occur. Perhaps they are derived from *sey* or *soy*, *spry*, *wry*, *weal*, *brew*, *moor*, *fry*, *bray*, *say*, *work*.

Some ending in *ship* imply an office, employment, or condition; as *kingship*, *wardship*, *guardianship*, *partnership*, *stewardship*, *beadship*, *brothership*.

Thus *worship*, that is, *worthship*; whence *shipful*, and *worship*.

Some few ending in *dom*, *rick*, *wick*, do especially denote dominion, at least state or condition; as *kingdom*, *dukedom*, *earldom*, *princedom*, *lordship*, *christendom*, *freedom*, *wisdom*, *ambrosia*, *bishoprick*, *bailiwick*.

Ment and *age* are plainly French terminations, and are of the same import with us as among them, scarcely ever occurring, except in words derived from the French, as *commandment*, *usage*.

There are in English often long trains of words allied by their meaning and derivation; as, to beat, a bat, baton, a battle, a beetle, a battle-dor, a batter, batter, a kind of glutinous composition for food, made by beating different bodies into one mass. All these are of similar signification, and perhaps derived from the Latin *batum*. Thus *take*, *touch*, *tickle*, *tack*, *tackle*; all imply a local conjunction, from the Latin *tango*, *tetigi*, *taudeo*.

From *two* are formed *twain*, *twains*, *twice*, *twelve*, *twins*, *twine*, *twist*, *twirl*, *twing*, *twining*, *between*, *betwixt*, *twilight*, *twinkl*.

The following remarks, extracted from *Wallis*, are ingenious, but of more subtlety than solid, and such as perhaps might in every language be enlarged without end.

It usually implies the *nose*, and what relates to it. From the Latin *nasus* are derived the French *nez* and the English *nose*; and *nose*, a promoter, as projecting like a nose. But as if from the Greek *nasos*.

Ion *ns* taken from *nafus*, and transposed, that they may the better correspond, *fn* denote *nafus*; and thence are derived many words that relate to the nose. as *snout*, *sneeze*, *snore*, *snort*, *sneer*, *snicker*, *snit*, *snivel*, *snite*, *snuff*, *snuffe*, *snuffe*, *snarie*, *snudge*.

There is another *sn*, which may perhaps be derived from the Latin *snuo*, as, *snake*, *sneak*, *snail*, *snare*; so likewise *snag* and *snatch*, *snib*, *snub*.

Bl imply a *blast*; as *blow, blast, to blast, to blight*, and metaphorically, *to blast one's reputation*; *bleat, bleak, a bleak place*, to look *bleak* or weather beaten, *bleak, blay, bleach, bluffer, blurt, blifter, blab, bladder, blab, blifer, blabber lips, blower, bleek't, bloted, blote berrings, blaf, blaze, to blowe*, that is *blowin, boom*; and perhaps *blood* and *bluff*.

In the native words of our tongue is to be found a great agreement between the letters and the things signified; and therefore the sounds of letters smaller, sharper, louder, closer, softer, stronger, clearer, more obscure, and more stridulous, do very often intimate the like effects in the things signified.

Thus words that begin with *fr* intimate the force and effect of the thing signified, as if probably derived from *frump*, or *strenuus*; as *strong*, *strength*, *strew*, *strike*, *break*, *stroke*, *strike*, *strive*, *strife*, *struggle*, *shout*, *strut*, *stretch*, *strew*, *strict*, *freight*, that is narrow, *disfrain*, *strejs*, *distress*, *string*, *strap*, *stream*, *streamer*, *strand*, *strip*, *stray*, *struggle*, *strange*, *stide*, *straddle*.

It in like manner imply strength, but in a less degree, so much only as is sufficient to preserve what has been already communicated, rather than acquire any new degree; as if it were derived from the Latin *sto*: for example, *stand, stay*, that is, to remain, or to prop; *stay, stay*, that is, to oppose; *stop, to stuff, stifle, to stay*, that is, to stop; *a stay*, that is, an oblique; *stick, stut, stutter, stammer, stinger, sickle, sick, stake*, a sharp pale, and any thing deposited at play: *stock, stem, sting, to sing, stink, stitch, stul, stun, stum, stub, stubble, to stub up, stamp*, whence *stumble, stalk, to stalk, slip, to slump* with the feet, whence *to stump*, that is, to make an impression and a stamp: *stew, to stow, to stew, steward, or stoward, stoad, stony, steadfast, stable, a stable, a stall, to stall, stool, stall, still, stall, stallage, still, stage, still* adj. and still adv. *stale, stout, sturdy, stead, stout, station, stiff, stark dead, to starve* with hunger or cold; *stone, steel, stern, stanch, to stanch blood, to stare, steep, people, stair, standard*, a stated measure, *stately*. In all these, and perhaps some others, *st* denote something firm and fixed.

Thr imply a more violent degree of motion, as *throw, thrust, thrang, throb, through, threat, threaten, thrall, throuse*.

We imply some sort of obliquity or distortion, as wry, to wreathe, wrest, wrestle, wring, wrong, wrinch, wrench, wrangle, wrinkle, wrath, wreak, wrack, wretch, wrist, wrap.

So imply a silent agitation, or a softer kind of lateral motion; as *sway*, *swag*, *to sway*, *swagger*, *swerve*, *sweat*, *sweep*, *swill*, *swim*, *swing*, *swift*, *sweet*, *switch*, *swinge*.

Nor is there much difference of *sin* in *smoots*, *smug*, *smile*, *snark*, *snite*, which signifies the same

as to *is*, but is a softer word: *small*, *smell*, *smack*, *smother*, *snart*, a *mart* blow properly signifies (such a kind of stroke as with an originally silent motion implied in *sm*, proceeds to a quick violence, denoted by *ar* suddenly ended, as is shewn by *r*).

*C*l denote a kind of adhesion or tenacity, as in *cleave*, *clay*, *cling*, *climb*, *clamber*, *clammy*, *clasp*, *to clasp*, *to clip*, *to clinch*, *cloak*, *clog*, *close*, *to close*, *a clod*, *a clot*, as *a clot of blood*, *clouted cream*, *a clutter*, *a cluffer*.

Sp. imply a kind of dissipation or expansion, especially a quick one, particularly if there be an *r*, as if it were from *spargo* or *separo*: for example *spread*, *spring*, *spring*, *spurge*, *separate*, *split*, *splinter*, *spill*, *spit*, *sputter*, *spatter*.

Sl denote a kind of silent fall, or a less observable motion; as in *slime*, *slide*, *slip*, *slipper*, *fly*, *slight*, *slit*, *slow*, *sluck*, *slight*, *sling*, *slap*.

And so likewise *afß*, *cræß*, *raßß*, *gaßß*, *flaßß*, *claßß*, *laßß*, *flaßß*, *plußß*, *traßß*, indicate something acting more nimbly and sharply. But *ußß*, in *crußß*, *rußß*, *gußß*, *flußß*, *blußß*, *brußß*, *tußß*, *pußß*, implies something as acting more obtusely and dully. Yet in both there is indicated a swift and sudden motion, not instantaneous, but gradual, by the continued sound *ß*.

Thus in *sing, fling, dmg, swing, cling, fing, wring, fling*, the tingling of the termination *ng*, and the sharpness of the vowel *i*, imply the continuation of a very slender motion or tremor, at length indeed vanishing, but not suddenly interrupted. But in *tink, wink, fink, clink, chink, think*, that end in a mute consonant, there is also indicated a sudden ending.

If there be an *l*, as in *jingle*, *tingle*, *tinkle*, *mingle*, *sprinkle*, *twinkle*, there is implied a frequency, or iteration of small acts. And the same frequency of acts, but less subtle by reason of the clearer vowel *a*, is indicated in *jungle*, *tungle*, *spangle*, *mangle*, *swangle*, *brangle*, *dangle*; as also in *mumble*, *grumble*, *jumble*, *tumble*, *flumble*, *rumble*, *crumble*, *fumble*. But at the same time the close *u* implies something obscure or obtunded; and a congeries of consonants *mb*, denotes a confused kind of rolling or tumbling, as in *ramble*, *foamble*, *feramb'e*, *swamble*, *amble*; but in these there is something acute.

In *nimble*, the acuteness of the vowel denotes celerity. In *sparkle*, *sp* denotes dissipation, *ar* an acute crackling; *k* a sudden interruption, *l* a frequent iteration; and in like manner in *sprinkle*, unless *in* may imply the subtilty of the dissipated guttules. *Thick* and *thin* differ, in that the former ends with an obtuse consonant, and the latter with an acute.

In like manner in *squeek, squeak, squeal, squall, braw, wraul, yaul, spaul, screek, shriek, shrill, sharp, shrivel, wrinkle, crack, crust, claf, gnash, clash, crush, bust, hiss, hiss, whiff, jarr, jarr, whirl, curl, whirl, buzz, buzzle, spindle, dandle, twine, twist*, and in many more, we may observe the agreement of such sort of sounds with the things signified: and this so frequently happens, that scarce any language which I know can be compared with ours. So that one monosyllable word, of which kind are almost all ours, emphatically expresses what in other languages can scarce

be explained but by compounds, or decompositions, or sometimes a tedious circumlocution.

We have many words borrowed from the Latin; but the greatest part of them were communicated by the intervention of the French; as *grace, face, elegant, elegance, resemble*.

Some verbs, which seem borrowed from the Latin, are formed from the present tense, and some from the supines.

From the present are formed *spend, expend, expendo; conduce, conduco; despise, despicio; approve, approbo; conceive, concipio*.

From the supines, *supplicate, supplico; demonstrate, demonstro; dispose, dispono; expatiate, expatio; suppress, suppresso; exempt, eximo*.

Nothing is more apparent, than that Wallis goes too far in quest of originals. Many of these which seem selected as immediate descendents from the Latin, are apparently French, as *conceive, approve, expose, exempt*.

Some words purely French, not derived from the Latin, we have transferred into our language; as, *garden, garter, luckler, to advance, to cry, to plead*, from the French *jardin, jartier, bouclier, avancer, crier, plaider*; though indeed, even of these, part is of Latin original.

As to many words which we have in common with the Germans, it is doubtful whether the old Teutons borrowed them from the Latins, or the Latins from the Teutons, or both had them from some common original; as *vine, vinum; wind, ventus; event, veni; away, via; wall, vallum; wallow, volvo; wool, vellus; will, volo; worm, vermis; worth, virtus; wasp, vespa; day, dies; draw, traho; tame, domo, δαμεν; yoke, jugum, ζυγον; over, upper, super, υπερ; am, sum, εμ; break, frango; fly, volo; blow, flo*. I make no doubt but the Teutonic is more ancient than the Latin: and it is no less certain, that the Latin, which borrowed a great number of words, not only from the Greek, especially the Æolic, but from other neighbouring languages, as the Oscan, and others, which have long become obsolete, received not a few from the Teutonic. It is certain, that the English, German, and other Teutonic languages, retained some derived from the Greek, which the Latin has not; as *ax, axis, mit, furd, pfurd, daughter, tochter, nickle, mingle, moon, fear, grave, grass; to grave, to scrape, a whole*, from *αξων, μισα, σελμας, θυγατερ, μυγματος, μνημα, φοβος, γραβη, γρας*. Since they received these immediately from the Greeks, without the intervention of the Latin language, why may not other words be derived immediately from the same fountain, though they be likewise found among the Latins?

Our ancestors were studious to form borrowed words, however long, into monosyllables; and not only cut off the formative terminations, but cropped the first syllable, especially in words beginning with a vowel; and rejected not only vowels in the middle, but likewise consonants of a weaker sound, retaining the stronger, which seem the bones of words, or changing them for others of the same organ, in order that the sound might become the softer; but especially transposing their order, that they might the more readily be pronounced without the intermediate vowels. For

example, in *expendo, spend; exemplum, sample; excipio, scape; extraneus, strange; extratum, stretch'd; excrucio, to frow; excorio, to frow; excorio, to scourge; excortico, to scratch; and others beginning with ex: as alio, emendo, to mend; episcopus, bishop; in Danish, Bisp; epistola, epistle; hospitale, spittle; Hispania, Spain; historia, story.*

Many of these etymologies are doubtful, and some evidently mistaken.

The following are somewhat harder, *Alexander, Sander; Elizabeth, Betty; apis, bee; aper, bar; p* passing into *b*, as in *bishop*: and by cutting off *a* from the beginning, which is restored in the middle: but for the old *bar* or *hare*, we now say *boar*; as for *lang, long*; for *bain, bane*; for *pas, stone*; *aprugna, brawn*, *p* being changed into *b*, and *a* transposed, as in *aper*, and *g* changed into *w*, as in *pignus, pawn*; *lege, law*; *αλεγειν, sea*; cutting off the beginning, and changing *p* into *b*, as in *pellis, a fell*; *pullus, a foal*; *pater, father*; *pavor, fear*; *polio, file*; *pleo, impleo, fill, full*; *piscis, fish*; and transposing *a* into the middle, which was taken from the beginning; *apex, a piece*; *peak, pike*; *zophorus, freeze*; *mulus, sum*; *defensio, fence*; *dispensator, spencer*; *sculto, scout*, Fr. *scout*; *excalpo, scrape, to har* instead of *r*, and hence *scrap, scrabble, scrawl*; *exculpo, scoop*; *exterritus, start*; *extonus, a-tonitus, storm'd*; *stomachus, maw*; *offendo, feed*; *obstipo, stop*; *audere, dare*; *cavere, ware*; whence *a-ware, be aware, wary, warn, awaring*, for the Latin *v* consonant formerly sounded like our *c*, and the modern sound of the *v* consonant was formerly that of the letter *f*, that is, the Æolic digamma, which had the sound of *q*, and the modern sound of the letter *f* was that of the Greek *φ* or *ph*; *ulcus, ulcer, ulcer, sore*, and hence *forry, sorrow, sorrowful*; *ingenium, engine, gun*; *scalenus, leaning*, unless you would rather derive it from *αλινω*, whence *inclino*; *infundibulum, funnel*; *egates, jet*; *projectum, to jet forth, a jet*, *cucullus, a coat*.

There are synecopes somewhat harder; from *tempore time*; from *nomine, name*; *domina, dame*; as the French *homme, femme, com*, from *homine, femina, nomine*. Thus *pagina, page; utinam, pot, utinam, cup*; *cantharus, can*; *tentorium, tent*; *precor, pray*; *præda, prey*; *specio, spæculor, spy*; *plico, ply*; *implico: imply*; *replico, reply*; *complico, comply*; *sedes, episcopalis, see*.

A vowel is also cut off in the middle, that the number of the syllables may be lessened; as, *amita, aunt*; *spiritus, spright*; *debitum, debt*; *dubito, doubt*; *comes, comitis, count*; *clericus, clerk*; *quietus, quit, quite*; *acquieto, to acquit*; *lepario, to spare*; *stabilis, stable*; *stabulum, stable*; *pallatium, palace, place*; *rabula, rail*; *racul, wand, brawl, rable, brable*; *quæritio, quest*.

As also a consonant, or at least one of a softer sound, or even a whole syllable; *rotundus, round*; *fragilis, frail*; *securus, sure, regula, rule*; *tegula, tile*; *subtilis, subtle*; *nomen, noun*; *decanus, dean*; *computo, count*; *subitaneus, sudden, seen*; *suprare, to soar*; *periculum, peril*; *mirabile, marvel*; as *magnus main*; *dignor, design*; *tingo, stain*; *unctum, taint*; *pingo, paint*; *prædari, reach*.

The contractions may seem harder, where made from their meet, as *supra*, *kyrk*, *church*; presby-
priest; *sacristanus*, *sexton*; *frango*, *fregi*,
break; *fagus*, *oak*, *beech*; *f* changed into
g into *ch*, which are letters near *a-k-n*; *fri-*
go, *freeze*; *frigeſco*, *fresh*, *ſe* in *ſh*, as above in
op, *ſiſh*, ſo in *ſcapſa*, *ſkip*, and *reſrigeſco*,
reſh; but *vireſco*, *fresh*; *phlebotomus*, *ſteam*;
ina, *beef*; *vitulina*, *veal*; *ſcutifer*, *ſquire*;
nitentia, *penance*; *ſanctuarium*, *ſanctuary*, *ſen-*
ſuſcitatio, *chafe*; *perquiſitio*, *purchase*; *an-*
ſula, *eel*; *inſula*, *iſle*, *ile*, *iſland*, *iſland*; *inſule-*
ſt, *ilet*; *eyght* and more contractedly *ey-*
ſence *Owſney*, *Raley*, *Ely*; *examinare*, to *ſcan*,
ely, by reſecting from the beginning and end
o, according to the uſual manner, the re-
nder *xamin*, which the Saxons, who did not
x, write *clamen*, or *ſcamen* is contracted into
o, as from *dominus*, *don*; *nomine*, *noun*; *abo-*
o, *ban*; and indeed *apum* *examen* they turned
oſtame; for which we ſay *ſwarme*, by infer-
o to denote the murmuring; the *ſaurus*, *ſore*;
le, *ſtoal*; *uſus*, *ue*; *ſudo*, *ſweat*; *gaudium*,
o; *jocus*, *joy*; *ſuccus*, *juice*; *catena*, *chain*; *ca-*
o, *calga*, *chaufe*, *chauſſ*; *Fr. hoſe*; *extinguo*,
quench, *ſquench*, *quench*, *ſint*; *ſoras*, *ſorib*; *ſpe-*
o, *ſpice*; *recito*, *read*; *adjuvo*, *aid*; *æſum*,
age, *ever*; *ſibecus*, *lock*; *excerpo*, *ſerape*,
ribble, *ſcracul*; *extravagus*, *ſtray*, *ſtruggle*; *col-*
um, *clot*, *clutch*; *colligo*, *coil*; *recolligo*, *re-*
o; *ſevero*, *ſwear*; *ſtridulus*, *ſbrill*; *procurator*,
xy; *pulſo*, to *puſh*; *calamus*, *a quill*; *impe-*
o, to *impeach*; *augeo*, *aux*, *wax*; and *vanef-*
vanui, *wane*; *ſyllabare*, to *ſpell*; *puteus*, *pit*;
nium, *corn*; *comprimo*, *cramp*, *crump*, *crumple*,
crumple.

Some may ſeem harſher, yet may not be re-
 ſected, for it at leaſt appears, that ſome of them
 derived from proper names, and there are o-
 ſers whoſe etymology is acknowledged by every
 dy; as, *Alexander*, *Elick*, *Scander*, *Sander*,
idy, *Sunny*; *Elizabetha*, *Elizabeth*, *Elizaſeth*,
ty, *Beſe*; *Margareta*, *Margaret*, *Marget*, *Meg-*
o; *Maria*, *Mary*, *Mal*, *Pai*, *Malkin*, *Mawkin*,
awakes; *Matthæus*, *Mattha*, *Matthew*; *Martha*,
ty, *Pat*; *Gulielmus*, *Wilhelmus*, *Girolamo*,
Laume, *William*, *Will*, *Bill*, *Wilkin*, *Wicken*,
cks, *Weeks*.

Thus *cariophyllus*, *ſos*; *geroſilo*, *Ital. giri-*
o, *giſoſer*, *Fr. giſſiſlower*, which the vulgar call
flower, as if derived from the month *July*; *pet-*
ſilium, *parſley*; *portulaca*, *puſtlain*; *cydonium*,
ne; *cydoniatum*, *quiddens*; *perſicum*, *peach*;
ica, *eruke*, which they corrupt to *ear ewig*, as
 it took its name from the ear; *annulus* *gemi-*
o, *a gimmel*, or *gimbal ring*; and thus the word
ſabal and *ſumbal* is transferred to other things
 as interwoven; quelques choſes, *kicſhaw*.
 ſee the origin of theſe, and many others, how-
 er forced, is evident, it ought to appear no
 nder to any one if the ancients have thus diſ-
 ſured many, eſpecially as they ſo much affected
 moſyllables; and, to make them ſound the ſott-
 took this liberty of maiming, taking away,
 angling, tranſpoſing, and ſoftening them.

Thus while we derive theſe from the Latin, I do
 not mean to ſay, that many of them did not im-
 mediately come to us from the Saxon, Daniſh,

Dutch, and Teutonick languages, and other dia-
 lects, and ſome taken more lately from the French
 or Italians, or Spaniards.

The ſame word, according to its different ſig-
 nifications, often has a different origin; as, to *bear*
a burden, from *ſero*; but to *bear*, whence, *birth*,
horn, *bairn*, comes from *pario*: and a *bear*, at
 leaſt if it be of Latin original, from *ſera*. Thus
perch, a fiſh, from *perca*; but *perch*, a meaſure,
 from *pertica*, and likewise to *perch*. To *ſpell*
 is from *ſyllaba*; but *ſpell*, an enchantment, by which
 it is believed that the boundaries are ſo fixed in
 lands, that none can paſs them againſt the maſ-
 ter's will, from *expello*; and *ſpell*, a meſſenger,
 from *epiſola*; whence *goſpel*, *good-ſpell*, or *god-*
ſpell. Thus *freeſe*, or *freeze*, from *frigeſco*; but
freeze, an architectonic word, from *zophorus*; but
freeſe, for *cloth*, from *Frifia*, or perhaps from
frigeſco, as being more fit than any other for keep-
 ing out the cold.

There are many words among us, even mono-
 ſyllables, compounded of two or more words, at
 leaſt ſerving inſtead of compounds, and compris-
 ing the ſignification of more words than one; as,
 from *ſcrip* and *roll*, comes *ſcroll*; from *proud* and
dance, *prance*; from *ſt*, of the verb *ſtay*, or *ſtand*
 and *out*, is made *ſtout*; from *ſtout* and *hardy*, *ſtur-*
dy; from *ſp* of *ſpit* or *ſpew*, and *out*, comes *ſpout*;
 from the *ſp*, with the termination *in*, is *ſpin*; and
 adding *out*, *ſpin out*; and from the ſame *ſp*, with
it, is *ſpit*, which only differs from *ſpout* in that it
 is ſmaller, and with leſs noiſe and force; but *ſpu-*
ter is, becauſe of the obſcure *u*, ſomething be-
 tween *ſpit* and *ſpout*; and by reaſon of adding *r*,
 it intimates a frequent iteration and noiſe, but ob-
 ſcurely conſuſed: whereas *ſpatter*, on account of
 the ſharper and clearer vowel *a*, intimates a more
 diſtinct noiſe, in which it chiefly differs from *ſpu-*
ter. From the ſame *ſp*, and the termination *ark*
 comes *ſpark*, ſignifying a ſingle emission of fire
 with a noiſe; namely, *ſp* the emission, *ar* the more
 acute noiſe, and *k*, the mute conſonant, intimates
 its being ſuddenly terminated; but adding *l*, is
 made the frequentative *ſparkle*. The ſame *ſp*, by
 adding *r*, that is *ſpr*, implies a more lively im-
 petus of diffuſing or expanding itſelf; to which ad-
 ding the termination *ing*, it becomes *ſpring*; its
 vigour *ſpr* imports, its ſharpneſs the termination
ing, and laſtly in acute and tremulous, ends in
 the mute conſonant *g*, denotes the ſudden ending
 of any motion, that it is meant in its primary ſig-
 nification, of a ſingle, not a complicated exiſtence.
 Hence we call *ſpring* whatever has an elaiſtick
 force; as alſo a fountain of water, and thence the
 origin of any thing; and to *ſpring*, to germinate;
 and *ſpring*, one of the four ſeaſons. From the
 ſame *ſpr* and *out*, is formed *ſprout*, and with the
 termination *ig*, *ſprig*; of which the following, for
 the moſt part, is the difference: *ſprout*, of a groſſ-
 ſer ſound, imports a ſatter or groſſer bud; *ſprig*,
 of a ſlenderer ſound, denotes a ſmaller ſhoot. In
 like manner, from *ſtr* of the verb *ſtrive*, and *out*,
 comes *ſtrout* and *ſtrut*. From the ſame *ſtr*, and
 the termination *uggle*, is made *ſtruggle*; and this
gl imports, but without any great noiſe, by rea-
 ſon of the obſcure ſound of the vowel *u*. In like
 manner, from *throu* and *rell* is made *trull*; and
 almoſt in the ſame ſenſe is *trundle*, from *throu* or
trubſt.

brush, and *rundle*. Thus *graff* or *groug* is compounded of *grave* and *rough*; and *trudge* from *tread* or *troat*, and *drudge*.

In these observations it is easy to discover great sagacity and great extravagance, an ability to do much defeated by the desire of doing more than enough. It may be remarked,

1. That Wallis's derivations are often so made, that by the same licence any language may be deduced from any other.

2. That he makes no distinction between words immediately derived by us from the Latin, and those which, being copied from other languages, can therefore afford no example of the genius of the English language, or its laws of derivation.

3. That he derives from the Latin, often with great harshness and violence, words apparently Teutonic; and therefore, according to his own declaration, probably older than the tongue to which he refers them.

4. That some of his derivations are apparently erroneous.

SYNTAX.

The established practice of grammarians requires that I should here treat of the Syntax; but our language has so little inflection, or variety of terminations, that its construction neither requires nor admits many rules. Wallis therefore has totally neglected it; and Jonson, whose desire of following the writers upon the learned languages made him think a syntax indispensably necessary, has published such observations as were better omitted.

The verb, as in other languages, agrees with the nominative in number and person; as, *Thou livest from good*; *he runs to death*.

Our adjectives and pronouns are invariable.

Of two substantives the noun possessive is the genitive; as, *His father's glory*, *The sun's heat*.

Verbs transitive require an oblique case; as, *He loves me*; *You fear him*.

All prepositions require an oblique case: *He gave this to me*; *He took this from me*; *He says this of me*; *He came with me*.

PROSODY.

It is common for those that deliver the grammar of modern languages, to omit their Prosody. So that of the Italians is neglected by *Buonmattei*; that of the French by *Desmarais*; and that of the English by *Walks*, *Cooper*, and even by *Jonson*, though a poet. But as the laws of metre are included in the idea of a grammar, I have thought it proper to insert them.

Prosody comprises *orthoepey*, or the rules of pronunciation; and *orthometry*, or the laws of verification.

PRONUNCIATION is just, when every letter has its proper sound, and when every syllable has its proper accent, or which in English verification is the same, its proper quantity.

The sounds of the letters have been already explained; and rules for the accent or quantity are not easily to be given, being subject to innumerable exceptions. Such however as I have read or formed, I shall here propose.

1. Of dissyllables formed by affixing a termination, the former syllable is commonly accented, as *childish*, *kingdom*, *ancest*, *acted*, *tailor*, *scuffer*, *fairer*, *foremost*, *zealous*, *subtle*, *meekly*, *artist*.

2. Dissyllables formed by prefixing a syllable to the radical word, have commonly the accent on the latter; as *to begot*, *to beset*, *to bestow*.

3. Of dissyllables, which are at once nouns and verbs, the verb has commonly the accent on the latter, and the noun on the former syllable; as *to descend*, *a descent*; *to cement*, *a cement*; *to trawl*, *a trawl*.

This rule has many exceptions. Though seldom have their accent on the former, yet seldom have it on the latter syllable; as *anger*, *perfume*.

4. All dissyllables ending in *y*, as *crayon*, *our*, as *labour*, *favour*; in *ow*, as *evilous*, except *allow*; in *le*, as *battle*, *bible*; in *en*, as *enish*; in *ck*, as *cambric*, *cassock*; in *ter*, as *enter*; in *age*, as *courage*; in *en*, as *suben*; in *et*, as *quiet*, accent the former syllable.

5. Dissyllable nouns in *er*, as *canter*, *ner*, have the accent on the former syllable.

6. Dissyllable verbs terminating in a consonant and *e* final, as *comprise*, *escape*; or having a diphthong in the last syllable, as *appease*, *read*, ending in two consonants, as *attend*, have the accent on the latter syllable.

7. Dissyllable nouns having a diphthong in the latter syllable, have commonly their accent on the latter syllable, as *applause*; except words in *er*, *certain*, *mountain*.

8. Trissyllables formed by adding a termination, or prefixing a syllable, retain the accent on the radical word, as *loveliness*, *tenderness*, *winner*, *quaggoner*, *physical*, *bespatter*, *commend*, *assurance*.

9. Trissyllables ending in *our*, as *gracious*, *duous*; in *al*, as *capital*; in *ion*, as *meriton*, accent the first.

10. Trissyllables ending in *ce*, *ent*, and *ent*, accent the first syllable, as *countenance*, *armament*, *imminent*, *élegant*, *propagate*, except they be derived from words having the accent on the last, as *connivance*, *acquaintance*; or the middle syllable hath a vowel before two consonants, as *promulgate*.

11. Trissyllables ending in *y*, as *unity*, *liberty*, *victory*, *subsidy*, commonly accent the first syllable.

12. Trissyllables in *re* or *le* accent the first syllable, as *légible*, *théâtre*, except *disciple*, and words which have a position, as *example*.

13. Trissyllables in *ude* commonly accent the first syllable, as *plénitude*.

14. Trissyllables ending in *ator*, or *ator*, as *créateur*, or having in the middle syllable a diphthong, as *endeavour*; or a vowel before two consonants, as *domestic*, accent the middle syllable.

15. Trissyllables that have their accent on the last syllable are commonly French, as *répartie*, *magazine*, or words formed by prefixing one or two syllables to an acute syllable, as *insure*, *overcharge*.

16. Poly syllables, or words of more than

ables, follow the accent of the words from which they are derived, as *árrogating*, *cóntinency*, *íntinently*, *comméndable*, *communicableness*. We could therefore say *disputable*, *indisputable*, rather than *disputable*, *indisputable*; and *advertisément* rather than *advertisement*.

17. Words in *íen* have the accent upon the antepenult, as *salvátion*, *perturbátion*, *concórdion*; words in *átour* or *átor* on the penult, as *dedicátor*.

18. Words ending in *le* commonly have the accent on the first syllable, as *ámicable*, unless the second syllable have a vowel before two consonants, as *combústible*.

19. Words ending in *ous* have the accent on the antepenult, as *uxórious*, *volúptuous*.

20. Words ending in *ty* have their accent on the antepenult, as *pússillánimity*, *actívity*.

These rules are not advanced as complete or allible, but proposed as useful. Almost every use of every language has its exceptions; and in English, as in other tongues, much must be learned by example and authority. Perhaps more and better rules may be given that have escaped my observation.

VERSIFICATION is the arrangement of a certain number of syllables according to certain laws. The feet of our verses are either iambick, as *íft*, *créate*; or trochaick, as *bóly*, *lósly*.

Our iambick measure comprises verses

four syllables,
Most good, most fair,
Or things as rare,
To call you's lost;
For all the cost
Words can bestow,
So poorly show
Upon your praise,
That all the ways
Sense hath, come short.

Drayton.

With ravish'd ears

The monarch hears.

Dryden.

fix,
This while we are abroad,
Shall we not touch our lyre?
Shall we not sing an ode?
Shall not that holy fire,
In us that strongly glow'd,
In this cold air expire?

Though in the utmost Peak
A while we do remain,
Amongst the mountains bleak,
Expos'd to sleet and rain,
No sport our hours shall break,
To exercise our vein.

Who though bright Phœbus' beams
Refresh the southern ground,
And though the princely Thames
With beauteous nymphs abound,
And by old Camber's streams
Be many wonders found.

Yet many rivers clear
Here glide in silver swatches,
And what of all most dear,
Buxton's delicious baths,
Strong ale and noble cheer,
T' assuage breem winter's scathes.

In places far or near,
Or famous, or obscure,
Where wholsom is the air,
Or where the most impure,
All times, and every where,
The muse is still in ure.

Drayton.

Of eight, which is the usual measure of short poems.

And may at last my weary age
Find out the peaceful hermitage,
The hairy gown, and mossy cell,
Where I may sit, and nightly spell
Of ev'ry star the sky doth shew,
And ev'ry herb that tips the dew.

Milton.

Of ten, which is the common measure of heroic and tragick poetry.

Full in the midst of this created space,
Betwixt heav'n, earth, and skies there stands a place

Confining on all three; with triple bound;
Whence all things, though remote, are view'd around

And thither bring their undulating sound.
The palace of loud Fame, her seat of pow'r,
Plac'd on the summit of a lofty tow'r;
A thousand winding entries long and wide
Receive of fresh reports a flowing tide.
A thousand crannies in the walls are made;
Nor gate nor bars exclude the busy trade.
'Tis built of brass, the better to diffuse
The spreading sounds, and multiply the news;
Where echo's in repeated echo's play:
A mart for ever full; and open night and day.
Nor silence is within, nor voice express'd,
But a deaf noise of sounds that never cease;
Confus'd, and chiding, like the hollow rore
Of tides, receding from th' insulted shore;
Or like the broken thunder, heard from far,
When Jove to distance drives the rolling war.
The courts are filled with a tumultuous din
Of crowds, or issuing forth, or entering in:
A thorough fare of news; where some devise
Things never heard, some mingle truth with lies:
The troubled air with empty sounds they beat,
Intent to hear, and eager to repeat.

Drayton.

In all these measures the accents are to be placed on even syllables; and every line considered by itself is more harmonious, as this rule is more strictly observed. The variations necessary to pleasure belong to the art of poetry, not the rules of grammar.

Our trochaick measures are

Of three syllables,
Here we may
Think and pray,
Before death
Stops our breath:
Other joys
Are but toys.

Walton's Angler.

Of five,
In the days of old,
Stories plainly told,
Lovers felt annoy.

Old Ballad.

Of seven,
Fairest piece of welform'd earth,
Urge not thus your haughty birth.
In these measures the accent is to be placed on the odd syllables.

Thele

These are the measures which are now in use, and above the rest those of seven, eight, and ten syllables. Our ancient poets wrote verses sometimes of twelve syllables, as Drayton's *Polyolbion*.

Of all the Cambrian shires their heads that bear so high,

And farth'ft survey their soils with an ambitious eye,

Mervinia for her hills, as for their matchless crowds,

The nearest that are said to kiss the wand'ring clouds,

Especial audience craves, offended with the throng,

That she of all the rest neglected was so long ;

Alluding for herself, when through the Saxon's pride,

The godlike race of Brute to Severn's setting side

Were cruelly inforc'd, her mountains did relieve

Those whom devouring war else every where did grieve.

And when all Wales beside (by fortune or by might)

Unto her ancient foe resign'd her ancient right,

A constant maiden still she only did remain,

The last her genuine laws which stoutly did retain,

And as each one is prais'd for her peculiar things ;

So only she is rich, in mountains, meres, and springs,

And holds herself as great in her superfluous waste,

As others by their towns, and fruitful tillage grac'd.

And of fourteen, as Chapman's Homer.

And as the mind of such a man, that hath a long way gone,

And either knoweth not his way, or else would let alone

His purpos'd journey, is distract.

The measures of twelve and fourteen syllables, were often mingled by our old poets, sometimes in alternate lines, and sometimes in alternate couplets.

The verse of twelve lines, called an *Alexandrian*, is now only used to diversify heroic lines.

Waller was imooth, but Dryden taught to join,

The varying verse, the full-resounding line,

The long majestic march, and energy divine. }
Pope.

The pause in the Alexandrine must be at the sixth syllable.

The verse of fourteen syllables is now broken into a soft lyric measure of verses, consisting alternately of eight syllables and six.

She to receive thy radiant name,
Selects a whiter space. } Fenton.

When all shall praise, and ev'ry lay
Devote a wreath to thee,

That day, for come it will, that day
Shall I lament to see. } Lewis to Pope.

Beneath this tomb an infant lies

To earth whose body lent,

Hereafter shall more glorious rise,

But not more innocent.

When the Archangel's trump shall blow,

And souls to bodies join,

What crowds shall with their lives below

Had been as short as thine. }
We have another measure very quick and

ly, and therefore much used in songs, which may be called the *anapestick*, in which the accent falls upon every third syllable.

May I govern my passions with absolute sway,
And grow wiser and better as life wears away. }
Dr. F.

In this measure a syllable is often retrenched from the first foot, as

Diogenes surly and proud. }
Dr. P.

When present, we love, and when absent
agrée,

I think not of I'ris, nor I'ris of me. }
Dr. P.

These measures are varied by many constructions, and sometimes by double endings, either with or without rhyme, as in the heroic measure

'Tis the Divinity that stirs within us,

'Tis Heav'n itself that points out an heroic measure.

And intimates eternity to man. }
Addison.

So in that of eight syllables.

They neither added nor confounded,

They neither wanted nor abounded. }
Pope.

In that of seven.

For resistance I could fear none,

But with twenty ships had done,

What thou, brave and happy Veron,

Hast achiev'd with six alone. }
Gower.

In that of six.

'Twas when the seas were roaring,

With hollow blasts of wind,

A damsel lay deplo'ring,

All on a rock reclin'd. }
Gower.

In the anapestick,

When terrible tempests assail us,

And mountainous billows affright,

Nor power nor wealth can avail us,

But skilful industry steers right. }
Bacon.

To these measures, and their laws, may be reduced every species of English verse.

Our versification admits of few licences, except a *synalepha*, or elision of *e* in *the* before a vowel,

as *th' eternal*; and more rarely of *o* in *to*, as *th' accept*; and a *syneresis*, by which two short vowels coalesce into one syllable, as *question*, *special*; or a word is contracted by the expulsion of a short vowel before a liquid, as *av'rice*, *temp'rance*.

Thus have I collected rules and examples, by which the English language may be learned;

the reader be already acquainted with grammatical terms, or taught by a master to those that are more ignorant.

To have written a grammar for such as are not yet initiated in the schools, would have been tedious, and perhaps at last ineffectual.

E N G

ENGLISH NEIGHBOURHOOD, a village of new Jersey, in Bergen county, W. of Fort Lee.

ENGLISH POINT, a cape in the river St. Law-

E N G

rence, on the coast of Canada. Lon. 61. 45. W. Lat. 49. 40. N.

ENGLISH ROAD, a road for shipping in the island.

land of Eooa, with 25 fathoms water. Lon.

74. 34. W. Lat. 41. 20. S.

ENGLISH TOWN, a village of New Jersey, in Monmouth county, 18 miles E. of Prince-town.

ENGLSTAIN, a town of Germany, in Aufria, 6 miles NW. of Zwettl.

* To ENGLUT. *v. a.* [*engloutir*, French.] *x.* To swallow up. It is now little used in any sense.—

Neither my place, nor ought I heard of business,

Hath rais'd me from my bed; nor doth the general

Take hold on me: for my particular grief

Engluts and swallows other sorrows.

Shakefp. Othello.

Certainly, thou art so near the gulf,

Thou needs must be englutted. *Shakefp. Hen. V.*

How many prodigal bits have slaves and peasants

This night englutted!

Shakefp. Timon.

To fill.—

Whose grieved minds, which choler did englut, Against themselves turning their wrathful spight.

Spenser.

To glut; to pamper.—Being once englutted with vanity, he will straightway loath all learning.

ycbam's Schoolmaster.

* To ENGORE. *v. a.* [from *gore*.] To pierce; to prick. Not used.—

As savage bull, whom two fierce mastiffs bait, When rancour doth with rage him once engore, Forgets with wary ward them to await, But with his dreadful horns them drives afore.

Spenser.

(1.) * To ENGORGE. *v. a.* [from *gorge*, Fr. throat.] To swallow; to devour; to gorge.—

Then fraught with rancour and engorged ire, He cast at once him to avenge for all.

That is the gulf of greediness, they say, That deep engorgeth all this worldis prey.

Spenser.

(2.) * To ENGORGE. *v. n.* To devour; to feed with eagerness and voracity; to riot.—

Greedily the engorg'd without restraint, And knew not eating death! *Milt. Par. Lost.*

To ENGRAFT. See To INGRAFT.

ENGRAFTING. See GRAFTING.

* To ENGRAIL. *v. a.* [from *grele*, French, ail.] To variegate; to spot as with hail. A word now used only in heraldry, for to indent in curve lines.—

Æacides then shews

A long lance, and a caldron, new eneraill'd with twenty hues.

Chapman's Iliads.

—Polwheel beareth a faultier engrailed. *Garew's urvey.*

* To ENGRAIN. *v. a.* [from *grain*.] To die deep; to die in grain.—

See thou how fresh my flowers being spread, Dyed in lilie white and crimfon red, With leaves engrain'd in lusty green.

Spenser's Pastorals.

* To ENGRAPPLE. *v. a.* [from *grapple*.] To lose with; to contend with hold on each other.—

There shall young Hotspur, with a fury led, Engrapple with thy son, as fierce as he. *Daniel.*

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* To ENGRASP. *v. a.* [from *grasp*.] To seize; to hold fast in the hand; to gripe.—

Now 'gan Pyrocles wax as wood as he,

And him affronted with impatient might;

And both together fierce engrasped be,

Whiles Guyon, standing by, their uncouth strife does see.

Spenser.

* To ENGRAVE. *v. a.* preter. *engraved*; part. pass. *engraved* or *engraven*. [*engraver*, French.]

1. To picture by incisions in any matter.—

Her ivory forehead, full of bounty brave,

Like a broad table, did itself dispread,

For love his lofty triumphs to engrave,

And write the battles of his great godhead.

Fairy Queen.

O'er all, the heav'n's refulgent image shines; On either gate were six engraven signs.

Addison's Ovid.

Names fresh engrav'd appear'd of wits renown'd;

I look'd again, nor could their trace be found.

Pope.

2. To mark wood or stone.—*Engrave* the two stones with the names. *Ex. xxviii. 11.* 3. To impress deeply; to imprint.—It will scarce seem possible, that God should engrave principles, in men's minds, in words of uncertain signification. *Locke.*—Our Saviour makes this return, fit to be engraven in the hearts of all promoters of charity. *Atterbury.*—

Sounds which address the ear, are lost and die In one short hour; but that which strikes the eye, Lives long upon the mind: the faithful fight Engraves the knowledge with a beam of light.

Watts.

4. [from *grave*.] To bury; to inume; to inter.—The son had charge of them, now being dead, In seemly sort their corse to engrave, And deck with dainty flowers their bridal bed.

Spenser.

* ENGRAVER. *n. s.* [from *engrave*.] A cutter in stone or other matter.—Images are not made in the brain itself, as the pencil of a painter or engraver makes the images in the table, but are imprinted in a wonderful method in the soul. *Hale.*

(I.) ENGRAVING, the art of cutting metals, precious stones, woods, &c. and representing thereon figures, letters, or whatever device or design the artist fancies. Engraving is properly a branch of SCULPTURE, and is divided into several other branches, according to the matter whereon it is employed, and the manner of performing it. See § i.—v.

(II.) ENGRAVING, HISTORY OF. Engraving is an art chiefly of modern invention; having its rise no earlier than the middle of the 15th century. The ancients, indeed, practised engraving on precious stones and crystals with very good success; and there are still many of their works remaining equal to any production of the later ages. But the art of engraving on plates and blocks of wood, to afford prints or impressions, was not known till after the invention of painting in oil. Of these last, the most ancient mode is that on wood; the first impressions on paper having been taken from carved wooden blocks. For this in-

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vention

vention we are indebted to the brief-malers, or makers of playing cards, who practised the art in Germany, about the beginning of the 15th century. From the same source may perhaps be traced the first idea of moveable types, which appeared not long after; for these brief-malers did not entirely confine themselves to the printing and painting of cards, but produced also subjects of a more devout nature; many of which, taken from holy writ, are still preserved in German libraries, with the explanatory text facing the figures; the whole engraved in wood. Thus a species of books was formed; such as, *Historia Sancti Johannis, ejusque Visiones Apocalypticæ; Historia Veteris & Novi Testamenti*, known by the name of the *Poor Man's Bible*. These short mementos were printed only on one side; and two of them being pasted together, had the appearance of a single leaf. The earliest date on any of these wooden cuts is 1423. The subject is *St Christopher carrying the Infant Jesus over the Sea*, preserved in a convent at Buxheim near Memmingen. It is of a folio size, illuminated in the same manner as the playing cards; and at the bottom is this inscription,

Cristoferi faciem de quacunque tueris.

Ille nempe die morte mala non morieris.

Millesimo CCCC° XX° tertio.

Upon the invention of moveable types, that branch of the brief-malers business, so far as it regarded the making of books, was gradually discontinued; but the art itself of engraving on wood continued in an improving state; and towards the end of the 15th and beginning of the 16th century, it became customary for almost every one of the German engravers on copper to engrave on wood also. The works of Albert Durer in this style of engraving are justly held in the highest esteem. Italy, France, and Holland, have produced many capital artists of this kind; but for boldness and spirit, we must see the prints of Christopher Jegher, who worked under the direction of Rubens, and was without doubt assisted by that great master. The invention of that species of engraving distinguished by the appellation of *chiaro-scuro*, seems also to be justly claimed by the Germans, and first practised by Mair; one of whose prints of this kind is dated 1499. Many excellent works in *chiaro-scuro* have been produced in France; and in Italy it was honoured with the performances of Titian and Parmegiano; but the attempts of Jackson, Kirkall, and others in England, have not been equally successful. A set of excellent prints in this way have lately been published by J. Skippe, Esq. a connoisseur and dilettante. In Germany, about A. D. 1450, prints from engraved copper first made their appearance. The earliest date of a copperplate print is indeed only 1461; but however faulty this print may be with respect to the drawing, or defective in point of taste, the mechanical part of the execution of it has by no means the appearance of being one of the first productions of the graver. We have also several other engravings, evidently the work of the same master; in which the impressions are so neatly taken from the plates, and the engravings so clearly printed in every part, that, according to all appearance, they could not be executed in

a much better manner in the present day, with all the conveniences which the copperplate printers now possess, and the additional knowledge they must necessarily have acquired in the course of more than three centuries. Hence we may fairly conclude, that if they were not the first specimens of the engraver's workmanship, they were much less the first efforts of the copperplate printer's ability. It is likewise to be observed, that Martin Schoen, who is said to have worked from 1460 to 1486, was apparently the scholar of Stohrs; for he followed his style of engraving, and copied from him a set of prints, representing the passion of our Saviour. Now, allowing Stohrs to have preceded his disciple only ten years, this carries the era of the art back to 1450, as was said above. There is no ground to suppose, that it was known to the Italians till at least ten years afterwards. The earliest prints that are known to be theirs are a set of the seven planets, and an almanack by way of frontispiece; on which are directions for finding Easter from 1465 to 1517 inclusive: and we may be assured, that the engravings were not antedated, as the almanack would have thus been less valuable. These prints must therefore have been executed in 1464, which is only 14 years later than the Italians claim. The three earliest Italian engravers are, Finiguerra, Boticelli, and Baldini. If we are to refer these prints to any of the three, we shall naturally conclude them to be the work of Finiguerra or Baldini; for they are not equal either in drawing or composition to those ascribed to Boticelli, which we know at least were designed by him; and as Baldini is expressly said to have worked from the designs of Boticelli, it will appear most probable that they belong to Finiguerra. With respect to the invention of Engraving, it seems to be not well known to whom it is to be ascribed. One of the most early specimens is the print by Albert Durer, known by the name of the *Cannon*, dated 1518, and thought by some, with little foundation, to have been worked on a plate of iron. Another etching by the same artist is Moses receiving the Tables of the Law, dated 1524. It was also practised in Italy soon after this by Parmegiano, in whose etchings we discover the hand of the artist working out a system as it were from his own imagination, and striving to produce the forms he wanted to express. We see the difficulty he laboured under; and cannot doubt, from the examination of the mechanical part of the execution of his works, that he had no instruction; and that it was something entirely new to him. If the story is true, that he kept an engraver by profession in his house, the novelty of the art is rendered so much the more probable. He died in 1540. As to that species of engraving in which the modes of *etching* and *cutting* with the graver are united, it must have been found necessary immediately upon the invention of etching; it was, however, first carried to perfection by G. Audran, and is now almost universally practised, whether the work is in *broken* or in *dots*. Engraving in *dots*, the present fashionable method, is a very old invention, and the only mode discovered by the Italians. Agostino de Musis, commonly called *Augustine of Venice*, a pupil of Marc Antonio, used it in several of his

It works, but confined it to the flesh, as in the dated print of An Old Man seated upon a Bank, th a Cottage in the back ground. He flourished from 1509 to 1536. We also find it in a print "A single Figure standing, holding a Cup and looking upwards," by Giulio Campagnola, who engraved about the year 1516. The back ground executed with round dots, made apparently th a dry point. The figure is outlined with a oke deeply engraved, and finished with dots, a manner greatly resembling those prints which emarteau engraved at Paris in imitation of red alk. The hair and beard are expressed by okes. Stephen de Laune, a native of Germany, followed the steps of Campagnola; and many his slight works are executed in dots only. John Boulanger, a French artist, who flourished the middle of the last century, and his contemporary Nicholas Van Plattenberg, improved greatly on this method, and practised it with much effect. It is only, however, of late, that it has been considered as an object worthy of general imitation. John Lutma executed this kind of work with a hammer and a small punch or chisel. Engraving in *mezzotinto* was invented about the middle of the 17th century; and the invention is generally been attributed to Prince Rupert. *MEZZOTINTO.* Engraving in *aquatinta* is quite a recent invention, and seems at once to have been carried to perfection by Sandby, and other artists of the present age. See *AQUATINTA.* Engraving *with the tool* was the kind originally practised, and it is yet retained for many purposes, or though etching be more easy, and other advantages attend it; yet where great regularity and exactness of the stroke or lines are required, working with the graver is much more effectual: on which account it is more suitable to the precision necessary in the execution of portraits; and there every thing the most minute must be made out and expressed, according to the original subject, without any licence to the fancy of the designer in deviating from it, or varying the effect ther by that masterly negligence and simplicity in some parts, or those bold sallies of the imagination and hand in others, which give spirit and force to history painting.

(i.) *ENGRAVING ON COPPER*, the making, correspondently to some delineated figure or design, which concave lines on a smooth surface of copper, either by cutting or corrosion, as render it capable, when charged properly with any coloured fluid, of imparting by compression an exact representation of the figure or design to paper or parchment. Whether we consider this branch of engraving, with regard to its utility, the pleasure it affords, or the difficulty that attends its execution, we cannot but confess, that on all these accounts it merits a distinguished rank among the polite arts. See *ARTS*, § 10—12. By this art the cabinets of the curious are adorned with the portraits of the greatest men of all ages and nations; and their memories, their most remarkable and most glorious actions, are transmitted to the latest posterity. By this art also, the paintings of the greatest masters are multiplied to a boundless number; and the lovers of the polite arts, however widely diffused, are enabled to enjoy those beauties, from

which their distant situations would otherwise have for ever debarred them. Persons of moderate fortunes are hereby enabled to become possessed of all the spirit, and all the poetry, contained in those miracles of art, which seemed to have been reserved for the temples of Italy, or the cabinets of princes. When we reflect, that the engraver, beside the beauties of poetic composition, and the artful ordinance or design, is to express, merely by the means of light and shade, all the various tints of colours and clair-obscur; to give a relief to each figure, and a truth to each object; that he is now to paint a sky serene and bright, and then loaded with dark clouds; now the pure tranquil stream, and then the foaming, raging sea; that here he is to express the character of the man, strongly marked in his countenance, and there the minutest ornament of his dress; in a word, that he is to represent all even the most difficult objects in nature; we cannot sufficiently admire the vast improvements in this art, and that degree of perfection to which it is at this day arrived. See *PRINTS*.

(1.) *ENGRAVING ON COPPER, DIFFERENT MODES OF.* These are as follow: 1. In strokes cut through a thin wax, laid upon the copper, with a point, and these strokes bitten or corroded into the copper with aquafortis. See *ETCHING*. 2. In strokes with the graver alone, unassisted by aquafortis. In this instance, the design is traced with a sharp tool, called a *dry point*, upon the plate; and the strokes are cut or ploughed upon the copper with an instrument distinguished by the name of a *graver*. 3. In strokes first etched and afterwards finished with the graver: by this expedient the two former methods are united. 4. In dots without strokes, which are executed with the point upon the wax or ground, bitten in with the aquafortis, and afterwards harmonized with the graver, by which instrument small dots are made; or with the graver alone, as in the flesh and finer parts, unassisted with the point. 5. In dots first etched and afterwards harmonized with the dry point, performed by a little hammer, called *opus mallei*, or *the work of the hammer*, as practised by Lutma and others. 6. In *MEZZOTINTO*. 7. In *AQUATINTA*. See these articles.

(2.) *ENGRAVING ON COPPER, INSTRUMENTS USED IN.* The principal instruments used in engraving with the tool are, gravers, scrapers, a burnisher, an oil-stone, and a cushion for bearing the plates. *GRAVERS* are made in several forms with respect to the points, some being square, others lozenge; the square graver for cutting broad and deep, and the lozenge for more delicate and fine strokes and hatches. La Boffe recommends, as the most generally useful, such as are of a form between the square and lozenge: and he advises, that they should be of a good length; small towards the point, but stronger upwards, that they may have strength enough to bear any stress there may be occasion to lay upon them: for if they be too small and mounted high, they will bend; which frequently causes their breaking, especially if they be not employed for very small objects. The *BURNISHER* is used to assist in the engraving on some occasions, as well as to polish the plates. It is 7 inches long, and made of fine steel well polished.

lished. The burnisher is formed at one end, and a scraper on the other, each about an inch and a half long from the point: betwixt them about 4 inches of the instrument is made round, and serves as a handle; and is thicker in the middle than at the necks, where the burnisher and scraper begin, which necks are only one quarter of an inch in diameter. The principal application of it in engraving, besides its use in polishing the plates, is to take out any scratches or accidental defacings that may happen to the plates during the engraving; or to lessen the effect of any parts that may be too strongly marked in the work, and require to be taken down. A CUSHION, as it is called, is generally used for supporting the plate in such a manner, that it may be turned every way with ease. It is a bag of leather filled with sand, which should be of the size that will best suit the plates it is intended to bear. They are round, and about 9 inches over, and $\frac{3}{4}$ inches in thickness. The DRY POINT, or NEEDLE, which has been of late much used in engraving, is a tool like an etching point, which being drawn hard on the copper, cuts a stroke, and raises a burr: the burr is scraped off, and there remains a stroke more soft and delicate than can be produced in any other way.

(3.) ENGRAVING ON COPPER, METHOD OF.

The cushion being laid on the table, the plate must be put upon it; and the graver being held in the hand in a proper manner, the point must be applied to the plate, and moved in the proper direction for producing the figures of the lines intended: observing, in forming straight lines, to hold the plate steady on the cushion; and where they are to be finer, to press more lightly, using greater force where they are to be broader and deeper. In making circular or other curve lines, hold your hand and graver steadily; and as you work, turn your plate upon the cushion against your graver, otherwise it will be impossible for you to make any circular or curved line with that neatness and command of hand you by this means may. After part of the work is engraved, it is necessary to scrape it with the scraper or graver, passed in the most level direction over the plate, to take off the roughness formed by the cutting of the graver; but great care must be taken not to incline the edge of the scraper or tool used, in such a manner that it may take the least hold of the copper, as it would otherwise produce false strokes or scratches in the engraving; and that the engraved work may be rendered more visible, it may afterwards be rubbed over with a roll of felt dipped in oil. In using the graver, it is necessary to carry it as level as possible with the surface of the plate; for otherwise, if the fingers slip betwixt them, the line that will be produced, whether curve or straight, will become deeper and deeper in the progress of its formation; which entirely prevents strokes being made at one cut, that will be fine at their extremities, and larger in the middle; and occasions the necessity of retouching to bring them to that state. For this reason, it is very necessary for those who would learn to engrave in perfection, to endeavour, by frequent trials, to acquire the habit of making such strokes both straight and curving, by lightening or sinking the

graver with the hand, according to the occasion. If, after finishing the design, any scratches appear, or any part of the engraving be falsely executed, such scratches, or faulty parts, must be taken out by the burnisher, and further polished, if necessary, by the above mentioned tool. The plate being thus engraved, it is proper to round off the edges, by using first a rough file, and afterwards a smoother; and to blunt the corners a little by the same means: after which, the burnisher should be passed over the edges to give it a farther polish. In the conduct of the graver and dry point consists all the art; for which there are no rules to be given; all depending on the habitude, disposition, and genius, of the artist. However, besides the explanations already given, some general observations and directions may not be improper. As the principles of engraving are the same with those of painting, a person cannot expect to attain any considerable degree of perfection in this art, who is not a good master of design; and therefore he ought to be well acquainted both with perspective and architecture: for the former, by the proper gradations of strong and faint colours, will enable him to throw backward the figures and other objects of the picture or design which he purposes to imitate; and the latter will teach him to preserve the due proportion of its several orders, which the painter often entrusts to the discretion of the engraver. In order to preserve equality and union in his works, the engraver should always sketch out the principal objects of his piece before he undertakes to finish them. In working, the strokes of the graver should never be crossed too much in a lozenge manner, particularly in the representation of flesh, because sharp angles produce the unpleasant effect of lattice-work, and take from the eye the repose which is to it agreeable in all kinds of picturesque design: we should except the case of clouds, tempests, waves of the sea, the skins of hairy animals, or the leaves of trees, where this method of crossing may be admitted. But in avoiding the lozenge, it is not proper to get entirely into the square, which would give too much of the hardness of stone. In conducting the strokes, the action of the figures, and of all their parts, should be considered; and it should be observed how they advance towards, or recede from the eye; and the graver should be guided according to the risings or cavities of the muscles or folds, making the strokes wider and fainter in the light, and closer and firmer in the shades. Thus the figures will not appear jagged; and the hand should be lightened in such a manner, that the outlines may be formed and terminated without being cut too hard; however, though the strokes break off where the muscle begins, yet they ought always to have a certain connection with each other, so that the first stroke may often serve by its return to make the second, which will show the freedom of the engraver. In engraving the *flesh*, the effect may be produced in the lighter parts and middle tints by long pecks of the graver, rather than by light lines; or by round dots; or by dots a little lengthened by the graver; or, best of all, by a judicious mixture of these together. In engraving the *hair* and the *beard*, the engraver should begin his work by

laying

aying the principal grounds, and sketching the chief shades in a careless manner, or with a few strokes; and he may finish it at leisure with finer and thinner strokes to the extremities. When architecture or sculpture is to be represented, except it be old and ruinous buildings, the work ought not to be made very black; because, as edifices are commonly constructed either of stone or white marble, the colour, being reflected on all sides, does not produce dark or brown shades as in other substances. White points must not be put in the pupils of the eyes of figures, as in engravings after paintings; nor must the hair or beard be represented as in nature, which makes the locks appear flowing in the air; because in sculpture there can be no such appearances. In engraving *cloths* of different kinds, linen should be done with finer and closer lines than other sorts, and be executed with single strokes. Woollen cloth should be engraved wide, in proportion to the coarseness or fineness of the stuff, and with only two strokes; and when the strokes are crossed, the second should be smaller than the first, and the third than the second. Shining stuffs, which are generally of silk or satin, and which produce flat and broken folds, should be engraved more hard and more straight than others, with one or two strokes, as their colours are bright or brown; and between the first strokes others smaller must be joined, which is called interlining. Velvet and plush are expressed in the same manner, and should always be interlined. *Metals*, as armour, &c. are also represented by interlining, or by clear single strokes. In architecture, the strokes which form the rounding object should tend to the point of sight; and when whole columns occur, it is proper to produce the effect as much as possible by perpendicular strokes. If a gross stroke is put, it should be at right angles, and wider and thinner than the first stroke. In engraving *mountains*, the strokes ought to be frequently discontinued and broken, for sharp and craggy objects; and they should be straight, in the lozenge manner, and accompanied with long points or dots; and rocks should be represented by cross strokes more square and even. Objects that are distant towards the horizon should be kept very tender, and slightly charged with black. *Waters* that are calm and still are best represented by strokes that are straight, and parallel to the horizon, interlined with those that are finer; omitting such places as, in consequence of gleams of light, exhibit the shining appearance of water; and the form of objects reflected from the water, at a small distance upon it, or on the banks of the water, are expressed by the same strokes, retouched more strongly or faintly as occasion may require, and even by some that are perpendicular. For agitated waters, as the waves of the sea, the first strokes should follow the figure of the waves, and may be interlined, and the cross strokes ought to be very lozenge. In cascades, the strokes should follow the fall, and be interlined. In engraving *clouds*, the graver should sport when they appear thick and agitated, in turning every way according to their form and their agitation. If the clouds are dark, so that two strokes are necessary, they should be crossed more lozenge than the fi-

gures, and the second strokes should be rather wider than the first. The flat clouds, that are lost insensibly in the clear sky, should be made by strokes parallel to the horizon, and a little waving; if second strokes are required, they should be more or less lozenge; and when they are brought to the extremity, the hand should be so lightened, that they may form no outline. The flat and clear sky is represented by parallel and straight strokes, without the least turning. In *landscapes*, the trees, rocks, earth, and herbage, should be etched as much as possible; nothing should be left for the graver but perfecting, softening, and strengthening. The dry point produces an effect more delicate than the graver can, and may be used to great advantage in linen, skies, distances, ice, and often in water, especially in small engravings. In most things it is proper to etch the shadows, only leaving the lighter tints for the dry point, graver, &c.

(4.) ENGRAVING ON COPPER, TO IMITATE DRAWINGS WITH CHALK. In performing this, a mixture is used of varied and irregular dots, made more or less soft, so as to resemble the grain produced by the chalks on paper. Every stroke of the chalks on paper may be considered as an infinite number of adjoining points, which are the small eminences of the grain of the paper touched by the chalk in passing over it. When the copper-plate has been polished and varnished, or properly prepared, as in the common method of engraving, the drawing to be imitated may be counterproved on the varnish of the plate. If this cannot be conveniently done, black lead pencil, or red chalk, must be applied to varnished or oiled paper; and by means of this chalk or pencil, all the traces of the original will be transmitted to varnish. The outlines of the object must be formed in the etching by points, whose magnitude and distance must be determined by the quality of the strokes in the original drawing. The artist may be provided with pointed instruments or needles of various sizes with single or double points. In forming the light and shade, he should distinguish between those hatches which serve to express the perspective of the object, and those which form the ground of it. The principal hatches should be more strongly marked; the middle tints, if etched, should be marked lightly, or they may be left till the varnish is taken off, and be perfected with a greater degree of softness, by needles or the point of the graver, as the original may require. There is nothing peculiar in the method of applying the aquafortis in this kind of engraving; but it may be observed, that it should not be left so long as to corrode the lighter parts too much: If the light parts are sufficiently corroded, they may be stopped out with turpentine varnish and lamp black mixed together, and the aquafortis may be applied again to the stronger parts; for it will be no detriment to them, if the points which compose the shade burst into one another, provided the extreme be avoided. When the work of the aquafortis is finished, and the varnish taken off the copper, it will be necessary in the softest parts, such as the flesh, &c. to interstipple with proper points; as an effect will be thus produced more delicate than it is possible to attain with the aquafortis only; and

the strongest shades will require additional strength to be given them with small strokes of the graver. Drawings made with chalks of different colours, may be imitated in this manner, if a plate be provided for every colour.—This method of engraving is intended to form a kind of deception, so that the connoisseur may not be able, on the first inspection, to distinguish between the original drawing and the engraving made in imitation of it; and it is extremely useful, as it serves to multiply copies of drawings left by those masters who excelled in the use of chalks, and thus to form and improve young artists, who could not have access to the originals in the practice of drawing.

(ii.) ENGRAVING ON GLASS is performed exactly by the same process as etching on copper; only using the *fluoric* instead of the *nitrous acid*. See CHEMISTRY, *Index*; and ETCHING.

(iii.) ENGRAVING ON PRECIOUS STONES is the representing of figures, or devices in relief or indented, on divers kinds of hard polished stones. The ancients excelled in this art; there being divers antique agates, cornelians, and onyxes, which surpass anything of that kind the moderns have produced. Pyrgoteles among the Greeks, and Dioscorides under the first emperors of Rome, are the most eminent engravers we read of: the former was so esteemed by Alexander, that he forbade any body else to engrave his head; and Augustus's head, engraven by the latter, was deemed so beautiful, that the succeeding emperors chose it for their seal. All the polite arts having been buried under the ruins of the Roman empire, the art of engraving on stones met with the same fate. It was retrieved in Italy at the beginning of the 15th century, when one John of Florence, and after him Dominic of Milan, performed works of this kind no way to be despised. From that time, such sculptures became common in Europe, and particularly in Germany, whence great numbers were sent into other countries: but they came short of the beauty of those of the ancients, especially those on precious stones; for, as to those on crystal, the Germans, and after their example the French, &c. have succeeded well enough. In this branch of engraving, either the diamond or emery may be used. The diamond, which is the hardest of all stones, is only cut by itself, or with its own matter. The first thing to be done in this branch of engraving is, to cement two rough diamonds to the ends of two sticks big enough to hold them steady in the hand, and to rub or grind them against each other till they be brought to the form desired. The dust or powder that is rubbed off serves afterwards to polish them, which is performed with a kind of mill that turns a wheel of soft iron. The diamond is fixed in a brass dish; and, thus applied to the wheel, is covered with diamond dust, mixed up with the oil of olives; and when the diamond is to be cut facet-wise, they apply first one face, then another, to the wheel. Rubies, sapphires, and topazes, are cut and formed the same way on a copper wheel, and polished with tripoli diluted in water. As to agates, amethysts, emeralds, hyacinths, granites, rubies, and others of the softer stones, they are cut on a leaden wheel, moistened with emery water, and polished with tripoli on a pewter wheel. Lapis lazuli,

opal, &c. are polished on a wooden wheel. To fashion and engrave vases of agate, crystal, lapis lazuli, or the like, a kind of lathe, like that used by pewterers, is used to hold the vessels, which are to be wrought with proper tools: that of the engraver generally holds the tools, which are turned by a wheel; and the vessel is held to them to be cut and engraved, either in relief or otherwise; the tools being moistened from time to time with diamond dust and oil, or at least emery and water. To engrave figures or devices on any of these stones, when polished, such as medals, seals, &c. they use a little iron wheel, the ends of whose axis are received within two pieces of iron, placed upright, as in the turner's lathe; and to be brought closer, or set further apart, at pleasure; at one end of the axis are fitted the proper tools, being kept tight by a screw. Lastly, The wheel is turned by the foot, and the stone applied by the hand to the tool, and is shifted and conducted as occasion requires. The tools are generally of iron, and sometimes of brass; their form is various, but they generally bear some resemblance to chisels, gouges, &c. Some have small round heads, like buttons, others like serrels, to take the pieces out, and others flat, &c. When the stone has been engraven, it is polished on wheels of hair brush and tripoli.

(iv.) ENGRAVING ON STEEL is chiefly employed in cutting seals, punches, matrices, and dies, proper for striking coins, medals, and counters. The method of engraving with the instruments, &c. is the same for coins as for medals and counters: All the difference consists in their greater or less relief; the relief of coins being much less considerable than that of medals, and that of counters still less than that of coins. Engravers in steel commonly begin with punches, which are in relief, and serve for making the creux or cavities of the matrices and dies; though sometimes they begin with the creux or hollows; but then it is only when the intended work is to be cut very shallow. The first thing that is done, is designing the figures; the next is the moulding them in wax, of the size and depth they are to be cut from this wax the punch is engraven. When the punch is finished, they give it a very high temper, that it may the better bear the blows of the hammer with which it is struck, to give the impression to the matrice. The steel is made hot to soften it, that it may the more readily take the impression of the punch; and after striking the punch on it in this state, they proceed to touch up or finish the strokes and lines, where, by reason of their fineness, or the too great relief, they are any thing defective, with steel gravers of different kinds; chisels, flatters, &c. being the principal instruments used in graving on steel. The figure being thus finished, they proceed to engrave the rest of the medal, as the mouldings of the border, the engrailed ring, letters, &c. with little steel punches, well tempered, and very sharp.

(v.) ENGRAVING ON WOOD. See CUTTING, § 7. It is performed in three different modes, viz. 1. With a single block, on which the design is traced with a pen, and those parts which should be white carefully hollowed out. This block is afterwards printed by the letter press printers, in the

same manner as they print a book. 2. With three, or more blocks; the first having the lines cut upon it; the 2d is reserved for the other shadows; and the 3d for the shadows which terminate upon the lights; and these are situated in their turn, each print receiving an impression from every block. This mode of engraving is called *CHIARO-SCURO*, and was designed to represent the drawings of the old masters. On wood and on copper: In these the outline engraved in a bold dark style upon the copper; and two or more blocks of wood are substituted to produce the darker and lighter shadows, as before.

* To *ENGRIEVE*. *v. a.* [from *grieve*.] To in; to vex; to afflict; to disconsolate—

The gnawing anguish, and sharp jealousy,
Which his sad speech infix'd in my breast,
Rankled so sore, and fester'd inwardly,
That my *engrieved* mind could find no rest.

Fairy Queen.

Aches, and hurts, and cords, do *engrieve* either
wards rain, or towards frost. *Bacon's Nat. Hist.*

* To *ENGROSS*. *v. a.* [*engrosser*, French.] 1. To thicken; to make thick.—

But more happy he than wife,
Of that sea's nature did him not avail;
The waves thereof so flow and sluggish were,
Engross'd with mud, which did them foul and
grieve,
That every weighty thing they did upbear.

Fairy Queen.

To encrease in bulk.—Though pillars, by chan-
celing, be seemingly *engross'd* to our sight, yet
they are truly weakened in themselves. *Wotton*. 3.
To fatten; to plump up.—

Not sleeping, to *engross* his idle body;
But praying, to enrich his watchful soul.

Shakep. R. III.

To seize in the gross; to seize the whole of
any thing.—

If thou *engross'st* all the griefs as thine,
Thou robb'st me of a moiety. *Shakep.*
—Those two great things that so *engross* the de-
votions and designs of both the nobler and ignobler
part of mankind, are to be found in religion; name-
ly, wisdom and pleasure. *South*.—

A dog, a parrot, or an ape,
Or some worse brute in human shape,
Engross the fancies of the fair. *Swift*.

To purchase the whole of any commodity for
the sake of selling at a high price. 6. To copy in
large hand.—

Here is th' indictment of the good lord Haf-
tings,

Which in a set hand fairly is *engross'd*. *Shakep.*

A clerk, foredoom'd his father's soul to cross,
Who pens a stanza when he should *engross*.

Pope.

* *ENGROSSER*. *n. f.* [from *engross*.] He that
purchases large quantities of any commodity, in
order to sell it at a high price.—A new sort of *en-
grossers*, or foretellers, having the feeding and
employing this numerous body of workmen in the
pollen manufactures, out of their warehouses,
at the price upon the poor landholder. *Locke*.

* *ENGROSSMENT*. *n. f.* [from *engross*.] Ap-

propriation of things in the gross; exorbitant
acquisition.—

Our thighs are pack't with wax, our mouths
with honey:

We bring it to the hive; and, like the bees,
Are murder'd for our pains! This better taste
Yield his *engrossments* to the dying father.

Shakep. Hen. IV.

—Those held their immoderate *engrossments* of
power and favour by no other tenure than pre-
sumption. *Swift*.

* To *ENGUARD*. *v. a.* [from *guard*.] To
protect; to defend; to surround as guards. Not
used.—

A hundred knights! yes, that on ev'ry dream
He may *enguard* his dotage with their pow'rs,
And hold our lives at mercy. *Shakep. K. Lear*.
ENGUELEGUINGIT, a town of Morocco.

ENGUICHE', in heraldry, is said of the great
mouth of a hunting horn, when its rim is of a
different colour from that of the horn itself.

ENHALLOW, a small island in the Orkneys,
between Rousa and Pomona.

ENHAM, a village in Hampshire.

* To *ENHANCE*. *v. a.* [*bausser*, *enbausser*, Fr.]
1. To lift up; to raise on high. A sense now ob-
solete.—

Both of them high at once their hands *en-
hauc'd*,

And both at once their huge blows down did
sway. *Spenser*.

2. To raise; to advance; to heighten in price.—
The desire of money is every where the same: its
value varies very little, but as its greater scarcity *en-
hances* its price, and increases the scramble. *Locke*.

3. To raise in esteem.—What is it but the expe-
rience of want that *enhances* the value of plenty?
L'Estr.—The remembrance of the difficulties we
now undergo, will contribute to *enhance* our plea-
sure. *Atterb.* 4. To aggravate; to increase from
bad to worse.—To believe or pretend that what-

ever our hearts incite is the will of God within us,
is the principle of villainy that hath acted in the
children of disobedience, *enhanced* and improved
with circumstances of greater impudence than the
most abominable heathens were guilty of. *Ham*.
—The relation which those children bore to the
priesthood, contributed to *enhance* their guilt, and
increase their punishment. *Atterb.*

* *ENHANCEMENT*. *n. f.* [from *enhance*.] 1.
Encrease; augmentation of value.—Their yearly
rents are not improved, the landlords making no
less gain by fines than by *enhancement* of rents.
Bacon. 2. Aggravation; increase of ill.—Jocular
slanders have, from the slightness of the tempta-
tion, an *enhancement* of guilt. *Gov. of the Tongue*.

ENHARMONIC, in music. The Greeks had
three different species of music; the *DIATONIC*,
the *CHROMATIC*, and the *ENHARMONIC*. This
last was esteemed by much the most agreeable
and powerful of the three; but the difficulty of
its execution rendered its duration short, and
later artists were upbraided for having sacrificed
it to their indolence. It proceeded upon lesser
intervals than either the diatonic or chromatic;
and as the chromatic semitone is still less than the
diatonic, the *enharmmonic* intervals must have con-
sisted

sifted of that semitone divided into parts more minute. In Rousseau's Musical Dictionary, at the article *ENHARMONIQUE*, the reader may see how that interval was found in the tetrachords of the ancients. It is not easy for modern ears, inured to intervals so widely different, to imagine how a piece of music, whose transitions were formed either chiefly or solely upon such minute divisions, could have such wonderful effects; yet the melody of speech, which rises or falls by intervals still more minute than the enharmonic, when properly modulated and applied with taste, has an astonishing power over the soul. As to the modern *enharmonic* system, we may likewise refer the reader to the same work for an account of its nature and use; though he will find it accurately and clearly explained by D'Alembert.

ENHYDRUS, in natural history, a genus of siderochita or crustated ferruginous bodies, formed in large and mostly empty caves, inclosing a small quantity of an aqueous fluid. Of this genus there are only two species: 1. The *thick-shelled enhydrus*, with black, reddish brown, and yellow crusts. 2. The *thinner-shelled* kind, with yellowish brown and purple crusts; neither of which ferments with aquafortis or gives fire with steel.

ENIAN, a river of England, in Cornwall, which runs into the Tamar, near Brownwally.

ENICO, a town of Maritime Austria. It forms along with Lusiana, Laverta, and Valle San Donaro, one of the *SETTI COMUNI*, or Seven Communes of Vicenza.

(1.) * **ENIGMA**. *n. f.* [*enigma*, Lat. *αἰνigma*.] A riddle; an obscure question; a position expressed in remote and ambiguous terms.—

The dark *enigma* will allow

A meaning; which, if well I understand,
From sacrifice will free the god's command.

Dryden.

—A custom was amongst the ancients of proposing an *enigma* at festivals, and adjudging a reward to him that solved it. *Pope.*

(2.) **ENIGMA**. See **ÆNIGMA**.

* **ENIGMATICAL**. *adj.* [from *enigma*.] 1. Obscure; ambiguously or darkly expressed.—your answer, sir, is *enigmatical*. *Shakspeare*.—*Enigmatical* deliveries comprehend useful verities; but being mistaken by liberal expositors at first, they have been misunderstood by most since. *Broome's Vulg. Err.*—Whilst they affect *enigmatical* obscurity, they puzzle the readers of their divulged processes. *Boyle*.—Athenæus gives instances of the *enigmatical* propositions in use at Athens, and of the forfeitures and rewards upon the solution or non-solution. *Broome's Notes on the Odyssey*. 2. Cloudy; obscurely conceived or apprehended.—Faith here is the assent to those things which come to us by hearing, and are so believed by adherence, or dark *enigmatical* knowledge, but hereafter are seen or known demonstratively. *Ham.*

* **ENIGMATICALLY**. *adv.* [from *enigma*.] In a sense different from that which the words in their familiar acceptation imply.—Homer speaks *enigmatically*, and intends that these monsters are merely the creation of poetry. *Broome.*

* **ENIGMATIST**. *n. f.* [from *enigma*.] One who deals in obscure and ambiguous matters; a

maker of riddles.—That I may deal more ingeniously with my reader than the abovementioned *enigmatist* has done, I shall present him with a key to my riddle. *Addison's Whig Examination.*

* **To ENJOIN**. *v. a.* [*enjoindre*, Fr.] To direct; to order; to prescribe. It is more authoritative than *direct*, and lets imperious than *command*.—

To satisfy the good old man,

I would bend under any heavy weight

That he'll *enjoin* me to. *Shakspeare. Much Ado.*

—Monks and philosophers, and such as do continually *enjoin* themselves. *Bacon*. It endeavours to secure every man's interest, by *enjoining* that truth and fidelity be inviolably preserved. *Taylor.*

* **ENJOINER**. *n. f.* [from *enjoin*.] One who gives injunction. *Diſt.*

* **ENJOINMENT**. *n. f.* [from *enjoin*.] Direction; command.—Critical trial should be made by publick *enjoinments*, whereby determination might be settled beyond debate. *Broome's Vulg. Err.*

(1.) * **To ENJOY**. *v. a.* [*jouir*, *enjoyer*, Fr.] To feel or perceive with pleasure; to have a pleasing sense of; to be delighted with.—

I could *enjoy* the pangs of death,

And smile in agony.

Addison's Con.

2. To obtain possession or fruition of.—Edward the saint, in whom it pleased God, righteous and just, to let England see what a blessing sin and iniquity would not suffer it to *enjoy*. *Hooker*.—

He, who, to *enjoy*

Plato's elysium, leap'd into the sea,

Cleombrotus.

Milton's Par. Lost.

3. To please; to gladden; to exhilarate; to gladden; to delight. This sense is usual with the reciprocal pronoun, and is derived from *enjoyir*.—Creatures are made to *enjoy* themselves, as well as to serve us. *Moore against Atheism*.—When a man shall, with a sober, sedate, diabolical rancour, look upon and *enjoy* himself in the sight of his neighbour's sin and shame, can he plead the infatigation of any appetite in nature? *South.*

(2.) * **To ENJOY**. *v. n.* To live in happiness.—Then I shall be no more!

And Adam, wedded to another Eve
Shall live with her *enjoying*, I extinct. *Milton.*

* **ENJOYER**. *n. f.* [from *enjoy*.] One that has fruition or possession. *Diſt.*

* **ENJOYMENT**. *n. f.* [from *enjoy*.] Pleasure; happiness; fruition. His hopes and expectations are bigger than his *enjoyments*. *Tillotson.*

ENIS, a village near Penryn, Cornwall.

ENISCRENE, a village of Ireland, in Sligo county, 132 miles from Dublin.

ENISEI, a river of Russian Siberia.

ENEISEISK, a large and populous fortified town of Russian Siberia, in the government of Tobolsk, on the Enisei, 400 miles ENE. of Kolivan, and 227 ENE. of Petersburg. Lon. 109. 36. E. of Ferro. Lat. 58. 16. N.

ENISKEON, a village of Ireland in Cort.

ENISTON HEAD, a noted promontory of Ireland, in Donegal. Lon. 8. 40. W. Lat. 53. 10. N.

ENIX, a town of Spain in Granada; 8 miles W. of Almeria.

ENIXUM, among chemists, a kind of natural salt, generated of an acid and an alkali. See *Sulphur*.

ENKHUSEN, a town in the island of Bornholm.

ENKHUYSEN. See **ENCHUYSEN.**
ENKIMACODY, a town of Ireland, in Kilenny, Leinster.

* **To ENKINDLE.** *v. a.* [from *kindle*.] 1. To set on fire; to inflame; to put in a flame.—Edmund, *enkindle* all the sparks of nature To quit this horrid act. *Shakef. King Lear.*
 . To rouse passions; to set the soul into a flame.—

Your hand

Gave sign for me to leave you: so I did,
 Fearing to strengthen that impatience,
 Which seem'd too much *enkindled*. *Shakef.*
 . To incite to any act or hope.—

Do you not hope your children shall be kings;
 When those who gave the thane of Cawder to me,

Promis'd no less to them?

—That, trusted home,

Might yet *enkindle* you unto the crown. *Shakef.*

ENKIOPING. See **ENDKIOPING.**

ENKIRCH, a town of Germany, in the circle of the Upper Rhine, and ci-devant county of Rhenish Prussia; at present annexed to the French republic, and included in the department of the Rhine and Moselle.

(1.) * **To ENLARGE.** *v. a.* [*enlargir*, French.]
 . To make greater in quantity or appearance.—

The wall, in lustre and effect like glass,
 Which o'er each object casting various dyes,
Enlarges some, and others multiplies. *Pope.*

. To encrease any thing in magnitude; to extend.—Where there is something both lasting and scarce, and so valuable to be hoarded up, there men will not be apt to *enlarge* their possessions of land. *Locke.* 3. To encrease by representation; to magnify; to exaggerate. 4. To dilate; to expand.—O ye Corinthians, our mouth is open unto you, our heart is *enlarged*. 2 *Cor. vi. 11.* 5. To set free from limitation.—Though she appear honest to me, yet at other places the *enlargeth* her mirth so far, that there is shrewd construction made of her. *Shakef. Merry Wives of Windsor.* 6. To extend to more purposes or uses.—It hath grown from to other root than only a desire to *enlarge* the necessary use of the word of God, which desire hath begotten an error, *enlarging* it farther than soundness of truth will bear. *Hooker.* 7. To amplify; to aggrandise.—This is that science which would truly *enlarge* mens minds, were it studied. *Locke.*—Could the mind, as in number, come to so small a part of extension or duration as excluded divisibility, that would be the indivisible unit, or dea; by repetition of which it would make its more *enlarged* ideas of extension and duration. *Locke.* 8. To release from confinement.—

Enlarge the man committed yesterday,
 That rail'd against our person. *Shakef. Henry V.*

. To diffuse in eloquence.—They *enlarged* themselves upon this subject with all the invidious insinuations they could devise. *Clarendon.*

(2.) * **To ENLARGE.** *v. n.* 1. To expatiate; to speak in many words.—They appointed the chancellor of the Exchequer to *enlarge* upon any of those particulars. *Clarendon.*—This is a theme so unpleasant, I delight not to *enlarge* on it; rather with the memory of it were extinct. *Decay of Piety.* 2. To be further extended.—The cal-

liph obtained a mighty empire, which was in a fair way to have *enlarged*, until they fell out among themselves. *Raleigh's Essays.*

* **ENLARGEMENT.** *n. s.* [from *enlarge*.] 1. Encrease; augmentation; farther extension.—The king afterwards *enlarged* the constant obedience of the city with *enlargement* both of liberties and of revenues. *Hayward.*—

The ocean, which so long our hopes confin'd,
 Could give no limits to his vaster mind:
 Our bounds *enlargement* was his latest toll,
 Nor hath he left us pris'ners to our isle.

—There never were any islands, or other considerable parcels of land, amassed or heaped up; nor any *enlargement*, or addition of earth, made to the continent by the mud that is carried down into the sea by rivers. *Woodward.*—The commons in Rome generally pursued the *enlargement* of their power by more set quarrels of one entire assembly against another. *Swift.*—The Greek tongue received many *enlargements* between the time of Homer and that of Plutarch. *Swift.* 2. Release from confinement or servitude.—

Lieutenant,
 At our *enlargement* what are thy due fees? *Shakef. Henry VI.*

—If thou holdest thy peace at the time, then shall their *enlargement* and deliverance arise to the Jews from another place. *Ejther, iv. 14.* 3. Magnifying representation.—

And all who told it, added something new;
 And all who heard it, made *enlargements* too. *Pope.*

4. Expatiating speech; copious discourse.—He concluded with an *enlargement* upon the vices and corruptions which were got into the army. *Clarendon.*

* **ENLARGER.** *n. s.* [from *enlarge*.] Amplifier; one that encreases or dilates any thing.—We shall not contentiously rejoice, but confer what is in us unto his name and honour, ready to be swallowed in any worthy *enlarger*. *Brown's Vulgar Errors.*

* **To ENLIGHT.** *v. a.* [from *light*.] To illuminate; to supply with light; to enlighten.—

Wit from the first has shone on ages past,
Enlights the present, and shall warm the last. *Pope.*

* **To ENLIGHTEN.** *v. a.* [from *light*.] 1. To illuminate; to supply with light.—God will *enlighten* my darkness. *Psalms.*—As the sun shineth to the whole world, so there is no faith but this one published, the brightness whereof must *enlighten* all that come to the knowledge of the truths. *Hooker.* 2. To quicken in the faculty of vision.—His eyes were *enlightened*. *Sam.*—

Love never fails to master what he finds;
 The fool *enlightens*, and the wise he blinds. *Dryden.*

3. To instruct; to furnish with encrease of knowledge.—This doctrine is so agreeable to reason, that we meet with it in the writings of the *enlightened* heathens. *Spektor.*—'Tis he who *enlightens* our understanding, corrects our wills, and enables us to subdue our affections to the law of God. *Rogers.* 4. To cheer; to exhilarate; to gladden. 5. To illuminate with divine knowledge.

ledge.—Those who were once *enlightened*. *Hebrews*.

* **ENLIGHTENER**. *n. f.* [from *enlighten*.]

1. Illuminator; one that gives light.—

O, sent from heav'n,

Enlight'ner of my darkness! gracious things
Thou hast reveal'd. *Milton's Par. Lost.*

2. Instructor.

* **To ENLINK**. *v. a.* [from *link*.] To chain
to; to connect.—

Enlinkt to waste and desolation.

Shakes. Henry V.

* **To ENLIVEN**. *v. a.* [from *life*, *live*.] 1.

To make quick; to make alive; to animate. 2.

To make vigorous or active.—

These great orbs thus radically bright,

Primitive founts and origins of light,

Enliven worlds denied to human sight. *Prior.*

—In a glass-house the workmen often fling in a
small quantity of fresh coals, which seems to dis-
turb the fire, but very much *enlivens* it. *Swift.*

3. To make sprightly or vivacious. 4. To make
gay or cheerful in appearance.

* **ENLIVENER**. *n. f.* [from *enliven*.] That
which animates; that which puts in motion; that
which invigorates.—

But fire, th' *enlivener* of the general frame;

Is one, its operation still the same:

Its principle is in itself; while ours

Works, as confederates war, with mingled
powers. *Dryden.*

* **To ENLUMINE**. *v. a.* [*enluminer*, French.]

To illumine; to illuminate; to enlighten. Not
in use.—

For having yet, in his deducted spright,

Some sparks remaining of that heav'nly fire,

He is *enlumin'd* with that goodly light,

Unto like goodly semblance to aspire. *Spenser.*

ENMANCHE', in heraldry, [from *manche*, Fr.
i. e. a sleeve,] is when lines are drawn from the
centre of the upper edge of the chief to the fides,
to about half the breadth of the chief; signifying
sleeved, or resembling a sleeve.

* **To ENMARBLE**. *v. a.* [from *marble*.] To
turn to marble; to harden. Obsolete.—

Their dying to delay,

Thou do'st *enmarble* the proud heart of her,
Whose love before their life they do prefer.

Spenser.

* **To ENMESH**. *v. a.* [from *mesh*.] To set;
to entangle; to intrap.—

So will I turn her virtue into pitch;

And out of her own goodness make the net

That shall *enmesh* them all. *Shakes. Othello.*

* **ENMITY**. *n. f.* [from *enemy*; as if *enemity*,
inamity.] 1. Unfriendly disposition; malevolence;
aversion.—Their being forced to their books, in
an age at *enmity* with all restraint, has been the
reason why many have hated books. *Locke.* 2.
Contrariety of interests or inclinations; mutual
malignity.—

They shall within this hour,

On a diffension of a doit, break out

In bitterest *enmity*. *Shakes. Coriolanus.*

Between thee and the woman I will put

Enmity, and between thine and her seed:

Her seed shall bruise thy head, thou bruise his
heel. *Milton.*

—How far these controverted, and appearing
inimities of those glorious creatures, may be carried,
is not my business to shew or determine. *Dryden's
Juvenal, Dedication.* 3. State of opposition.—
Know ye not that the friendship of the world's
enmity with God? *Jam. iv. 4.*—You must first
be convinced, that every sin you commit lets you
at *enmity* with heaven, and will, if not forsaken,
render you incapable of it. *Wake's Preparation
for Death.* 4. Malice; mischievous attempts.—

I abjure all rooffs, and chafe

To wage against the *enmity* o' th' air. *Shak.*
—He who performs his duty in a station of great
power, must needs incur the utter *enmity* of ma-
ny, and the high displeasure of more. *Atterbury.*

ENMORE, a village in Somersetshire, near
Bridgewater.

ENNA, in ancient geography, a town of Sic-
ily, situated on an eminence S. of the Chrysis,
called the *centre of Sicily*. It was famous for a
sacred grove, in which the rape of Proserpina was
fabled to have happened; for a temple of Ceres,
thence surnamed *Ennea*, and *Enneafis*; and in
fine springs, whence the name. *Bocbart.*

ENNEADECATERIDES, [from *ennea*, *enue*,
and *deka*, ten,] a revolution of 19 years.

(1.) * **ENNEAGON**. *n. f.* [from *ennea* and *gon*.]
A figure of nine angles.

(2.) **ENNEAGON**, in geometry, a polygon with
nine sides. See **POLYGON**.

ENNEAHEDRIA, in natural history, a genus
of columnar, crystalliform, and double-pointed
spars, composed of a trigonal column, terminated
at each end by a trigonal pyramid. Of this ge-
nus there are several species, distinguished by the
length or shortness of the column and pyramid,
none of which give fire with steel, but all of them
ferment with aquafortis. See **SPAR**.

ENNEANDRIA, in botany, [from *ennea*, *enue*,
and *andros*, a man,] the 9th class in Linnaeus's sex-
ual system, consisting of plants which have her-
maphrodite flowers with 9 stamens or male or-
gans. See **BOTANY**, *Index*.

* **ENNEATICAL**. *adj.* [*ennea*.] *Enneatic*
days, are every ninth day of a sickness; and *ennea-
tical years*, every ninth year of one's life.

ENNEBACKO, a town of Norway, 26 miles
SE. of Christiania.

ENNEL, LOUGH, a lake of Ireland, in W.
Meath, 2 miles S. of Mullingar.

ENNERDALE, a district in Cumberland.

ENNERIS, in ancient ship building, a galleys
with 9 tires of oars.

ENNEZAT, a town of France, in the départ-
ment of Puy de Dome.

ENNIS, or **CLARE**, the capital of Clare county
in Ireland. See **CLARE**, N° 8. It is 112 7/8
SW. of Dublin. Lon. 9. 0. W. Lat. 52. 42. N.

ENNISCORTHY, a market town of Ireland,
in Wexford, Leinster; 59 miles S. of Dublin. Lon.
6. 30. W. Lat. 52. 25. N.

ENNISFALLEN, an island of Ireland, in Ky-
ry, Munster, a luxuriant and beautiful site in En-
larney Lake, where travellers generally dine, in
a sort of hall, fitted out by the proprietor, out of
one of the aisles belonging to an ancient abbey
now in ruins.

ENNISKERRIES, two islands of Ireland, in
County

Kilmurry Bay, 6 miles off the coast of Clare county. Lon. 9. 35. W. Lat 52. 40. N.

ENNISKERRY a village of Ireland, in Wicklow, 10 miles from Dublin.

ENNISKILLEN. See **INNISKILLEN.**

ENNIUS, Quintus, an ancient Latin poet, born at Rudii, a town in Calabria. He came first to Rome when M. Portius Cato was questor, whom he had instructed in the Greek language in Iardinia; and by his genius and behaviour he gained the esteem of the most eminent persons in the city. According to Horace, Ennius never applied himself to writing till he drank freely of wine. Hence he contracted the gout, of which he died, A. A. C. 9. He was interred in Scipio's sepulchre; who had a great esteem for him, and caused a statue to be erected to him upon his monument. He endeavoured to introduce the treasures of the Greek tongue among the Latins, and was the first among the Romans who made use of heroic verses. He wrote the *Annals of Rome*; he translated several tragedies from the Greek, and wrote others, besides several comedies. We have only some fragments of his works, which were first collected by the two Stephens, and afterwards published at Naples, with a learned commentary, by Jerom Columna, in 4to, 1590; and reprinted at Amsterdam in 1707, 4to, with additions by Hesselius.

* **TO ENNOBLE.** *v. a.* [ennoblier, French.]

1. To raise from commonality to nobility.—

Many fair promotions

Are given daily to *ennoble* those,

That scarce some two days since were worth a noble. *Shakesp.*

2. To dignify; to aggrandise; to exalt; to raise.—God raised up the spirit of this great person, and *ennobled* his courage and conduct with the entire overthrow of this mighty host. *South.*

What can *ennoble* sets, or slaves, or cowards?

Alas! not all the blood of all the Howards.

Pope.

3. To elevate; to magnify.—

None so lovely, sweet and fair,

Or do more *ennoble* love. *Waller.*

4. To make famous or illustrious.—The Spaniards could not as invaders land in Ireland, but only *ennobled* some of the coasts thereof with shipwrecks. *Bacon.*

* **ENNOBLEMENT.** *n. f.* [from *ennoble*.]

1. The act of raising to the rank of nobility.—He added, during parliament, to his former creations, the *ennoblement* or advancement in nobility of a few others. *Bacon.* 2. Exaltation; elevation; dignity.—The eternal wisdom enriched us with all *ennoblements*, suitable to the measures of an unfrustrated goodness. *Glanville.*

ENNON. See **BEN-HINNON.**

ENNUI, *n. f.* A French word almost naturalized, and one of the few which the English language seems really to stand in need of. (See *Ci-devant*, and *ENGLISH LANGUAGE*, *Pref.*, page 673. col. 2. and 674. col. 1.) In the original it is used to signify *weariness*, *heaviness*, or *tiredness*; also *vexation*, *trouble*, *sorrow*, or *disquiet*. In English it is used only to express that listless state of insipidity and inactivity of body

and mind, with which people in high life are often tormented, at those intervals of habitual dissipation, which lie heavy upon them, when, having no object that immediately interests their passions, they feel themselves totally at a loss how to employ, or, as the fashionable world expresses it, to *kill their time*; and who, of consequence spend in drowsy yawnings, till the hour of dissipation or riot returns. In a word, *Ennui* is a disease of the mind, wherein the body is also in some degree affected, produced by continued habits of indolence, luxury and dissipation, or frivolous amusement, and which greatly detracts from the happiness of those, who, if they were to employ the gifts of fortune in a more rational manner, would have it in their power to fill up every moment of life, in the purest and most perfect happiness that the present state of human nature affords, by enjoying felicity themselves and dispensing it to all around them.

ENO, or **ENOS**, a town of European Turkey, in Romania, 28 miles NW. of Gallipoli, and 125 W. of Constantinople. Lon. 26. 15. E. Lat. 40. 46. N.

(1.) **ENOCH**, [עֲנוֹךְ, Heb. *i. e.* dedicated.] the son of Cain, in honour of whom

(2.) **ENOCH**, the first city taken notice of in scripture, was so called by Cain, who built it. It was situated E. of Eden. Gen. iv. 17.

(3.) **ENOCH**, the son of Jared and father of Methuselah, was born A. M. 622. At the age of 65 he began Methuselah, and lived 300 years after, and had several sons and daughters. Enoch walked with God; and after that he had lived 365 years, "he was not, for God took him." Some construe these last words, as if they intimated that Enoch died a natural death, because in reality he lived not near so long as the other patriarchs of those times; as if God, to secure him from corruption, had taken him early out of this world. But the generality of the fathers and commentators assert that he died not, but was translated out of the sight of men, as Elijah was. The apostle Paul shows very clearly that Enoch was translated, and did not see death. Heb. xi. 5. The eastern people, who call Enoch *Edris*, believe that he received from God the gift of wisdom and knowledge; and that God sent him 30 volumes from heaven, filled with all the secrets of the most mysterious sciences. The Rabbins maintain, that when Enoch was translated to heaven, he was admitted into the number of the angels, and is the person generally known by the name of *Michael*.

(4.) **ENOCH**, THE PROPHECY OF, an apocryphal book, ascribed to Enoch. The apostle Jude (ver. 14, 15.) cites a passage from the book of Enoch, which has very much exercised interpreters. The question is, whether the apostle took this passage out of any particular book written by Enoch, which might be extant in the first ages of the church? whether he received it by tradition? or lastly, by some particular revelation? It is thought probable, that he read it in the book ascribed to Enoch, which, though apocryphal, might contain several truths that St Jude, who was favoured with a supernatural degree of understanding, might make use of to the edification of the faithful. The ancients greatly esteemed this work. Tertullian ex-

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presses his concern, that it was not generally received. That father, on the authority of this book, deduces the original of idolatry, astrology, and unlawful arts, from the revolted angels, who married with the daughters of men. St Augustin allows, indeed, that Enoch wrote something divine, because he is cited by St Jude; But he says, It was not without reason that this book was not inserted in the canon, which was preserved in the temple at Jerusalem. This father sufficiently insinuates, that the authority of this book is doubtful, and that it cannot be proved that it was really written by Enoch. Indeed the account it gives of giants engendered by angels, and not by men, has manifestly the air of a fable, and the most judicious critics believe it ought not to be ascribed to Enoch. This book lay a long time buried in darkness, till the learned Joseph Scaliger recovered a part of it. Scaliger, Vossius, and other learned men, attribute this work to one of those Jews who lived between the time of the Babylonish captivity and that of Jesus Christ. Others are of opinion, that it was written after the rise and establishment of Christianity, by one of those fanatics with whom the primitive church was filled, who made a ridiculous mixture of the Platonic philosophy and the Christian divinity.

* **ENODATION.** *n. f.* [*enodatio*, Latin.] 1. The act of untying a knot. 2. Solution of a difficulty. *DiB.*

ENOLA, a town of Naples, in the province of *Lavora*; 4 miles N. of Fundi.

ENOMTEKIS, a town of Swedish Lapland, 350 miles N. of Tornea.

* **ENORMITY.** *a. f.* [from *enormous*.] 1. Deviation from rule; irregularity. 2. Deviation from right; depravity; corruption.—We shall speak of the particular abuses and enormities of the government. *Spenser's State of Ireland*.—That this law will be always sufficient to bridle or restrain *enormity*, no man can warrant. *Hocker*.—There are many little *enormities* in the world, which our preachers would be very glad to see removed; but at the same time dare not meddle with them, for fear of betraying the dignity of the pulpit. *Addison's Guardian*. 3. Atrocious crime; flagitious villainy; crimes exceeding the common measure. In this sense it has a plural.—It is not a bare speculation that kings may run into *enormities*; the practice may be proved by example. *Swift*.

(1.) * **ENORMOUS.** *adj.* [*enormis*, Lat.] 1. Irregular; out of rule; not regulated by any stated measure.—

Wallowing, unweildy, *enormous* in their gait.

Milton.

Nature here

Wanton'd, as in her prime; and play'd as will
Her virgin fancies, pouring forth more sweets,
Wild above rule, or art, *enormous* bliss:

Milton.

2. Excursive beyond the limits of a regular figure.—The *enormous* part of the light in the circumference of every lucid point, ought to be less discernible in shorter telescopes than in longer, because the shorter transmit less light to the eye. *Newton's Opticks*. 3. Disordered; confused,—

I shall find time

From this *enormous* state, and seek to give
Losses their remedies. *Shakef. King Lear.*

4. Wicked beyond the common measure. 5. Exceeding in bulk the common measures: always used with some degree of dislike, or horror, or wonder.—

A giant shepherd here his flock maintain,
Far from the rest, and solitary reigns,
A form *enormous*! far unlike the race
Of human birth, in stature, or in face.

Pope's Odyssey.

(2.) **ENORMOUS DAMAGE**, [*Levis enormis*], is the exorbitant French jurisprudence, is that which exceeds half the value of the thing sold.

* **ENORMOUSLY.** *adv.* [from *enormous*.] Beyond measure.—One who could ever expect a notion, so *enormously* absurd and senseless, as that the world was framed by chance. *Woodward*.

* **ENORMOUSNESS.** *n. f.* [from *enormous*.] Immeasurable excess.—When those who have an opportunity to examine our faith, see the *enormousness* of our works, what should hinder them from measuring the master by the disciples? *Dissay of Piety*.

(1.) **ENOS**, the son of Seth and father of Cainan, was born, A. M. 235. Moses tells us (Gen. ix. 26.) that then “men began to call upon the name of the Lord;” or, as others translate it, that “Enos began to call upon the name of the Lord;” or was the inventor of religious rites and ceremonies in the external worship. This worship was kept up and preserved in Enos’s family, while Cain’s family was plunged in all kinds of immorality and impiety. Several Jews are of opinion, that idolatry was first introduced into the world in the time of Epos. They translate the Hebrew thus, “Then men began to profane the name of the Lord.” Good men, to distinguish themselves from the wicked, began to take upon them the quality of sons or servants of God; for which reason, Moses (Gen. vi. 1, 2.) says, that *the son of God* (that is to say the descendants of Enos, who had hitherto preserved the true religion), seeing the daughters of men, that they were fair, took them wives of all which they chose. Enos died at the age of 905; A. M. 1140.

(2.) **Enos.** See **ENO**.

ENOSBURG, a township of Vermont, in Franklin county; 18 miles E. of Swanton.

ENOTARUSK, a town of Russia in the government of Caucasus, on the Volga; 72 miles NNE. of Astracan. Lon. 64. 5. E. of Ferro. Lat. 47. 15. N.

(1.) * **ENOUGH.** *adj.* [*genob*, Sax. *ganab*, Goth. *genog*, Dut.] It is not easy to determine whether this word be an adjective or adverb; perhaps when it is joined with a substantive, it is an adjective, of which *enough* is the plural. In other situations it seems an adverb; except that after the verb *To have*, or *To be*, either expressed or understood, it may be accounted a substantive. It is pronounced as if it were written *enuff*. In a sufficient measure; so as may satisfy; so as may suffice.—

Why would'st thou go, with one consent they cry,

When thou hast gold *enough*, and Emily? *Dryd.*

—Wick

—When there was not room *enough* for their herds, they by consent separated, and enlarged their pasture. *Locke.*

(2.) * **ENOUGH.** *adv.* 1. In a sufficient degree; in a degree that gives satisfaction. 2. It notes a light augmentation of the positive degree: as, *I am ready enough to quarrel*; that is, I am rather quarrelsome than peaceable.—I am apt *enough* to think, that this same binarium of a stronger and a weaker, like unto masculine and feminine, doth hold in all living bodies. *Bacon.*—It is sometimes pleasant *enough* to consider the different notions which different persons have of the same thing. *Addison.*—They are now in prison at Florence; and, as it is said, treated hardly *enough.* *Addison in Italy.* 3. Sometimes it notes diminution; as, he song is well *enough*; that is, not quite well, though not much amiss. 4. An exclamation notingfulness or satiety.—

Macbeth, beware Macduff!

Beware the thane of Fife! Dismiss me.—*Enough.* *Shakespeare.*

Henceforth I'll bear

Affliction, 'till it do cry out itself,

Enough, enough, and die. *Shakespeare. K. Lear.*

(3.) * **ENOUGH.** *n. f.* 1. Something sufficient in greatness or excellence.—'Tis *enough* for me to have endeavoured the union of my country whilst continued in public employments. *Temple.*—The inducency and enjoyment we have, sufficing or our present happiness, we desire not to venture the change, being content, and that is *enough.* *Locke.*—

Enough for me that to the list'ning swains, First in those fields I sung the silvan strains. *Pope.*—I will not quarrel with the present age: it has done *enough* for me, in making and keeping you to my friends. *Pope.* 2. Something equal to a man's powers or faculties.—Some great defects and main errors in his nature, customs, and proceedings, he had *enough* to do to save and help, with a thousand little industries and watches. *Bacon.*

* **ENOW.** The plural of *enough.* In a sufficient number.—The earth hath since born *enow* breeding witnesses, that it was no want of true courage. *Sidney.*—The walls of the church there are *enow* contented to build: the marbles are polished, the roofs shine with gold, the altar bath precious stones to adorn it, and of Christ's ministers no choice at all. *Hocker.*—

Man had selfish foes *enow* besides,
That, day and night, for his destruction wait.

Milton.

My conquering brother will have slaves *enow*,
To pay his cruel vows for victory. *Dryden.*
—There are at Rome *enow* modern works of architecture to employ any reasonable man. *Addison in Medals.*

* **EN PASSANT.** *adv.* [French.] By the way.
* **TO ENPIERCE.** *v. a.* [from *pierce.*] To transfix.—

I am too sore *enpierced* with his shaft
To soar with his light feathers. *Shakespeare.*

TO ENQUIRE. See **TO INQUIRE.**

* **TO ENRAGE.** *v. a.* [enrager, Fr.] To irritate; to provoke; to make furious; to exasperate.—The justice of their quarrel should not so much encourage as *enrage* them, being to revenge the

dishonour done to their king, and to chastise deceitful enemies. *Hayward.*—

Enrag'd at this, upon the bawd I flew;
And that which most *enrag'd* me was, 'twas true. *Walsh.*

* **TO ENRANGE.** *v. a.* [from *range.*] To place regularly; to put into order.—

In their jaw

Three ranks of iron teeth *enranged* were. *Fairy Q.*

As fair Diana, in fresh summer's day,

'Beholds her nymphs *enrang'd* in shady wood.

Fairy Queen.

* **TO ENRANK.** *v. a.* [from *rank.*] To place in orderly ranks.—

No leisure had he to *enrank* his men. *Shakespeare.*

* **TO ENRAPT.** *v. a.* [from *rapt*: the participle preterite seems to be *enrapt.*] 1. To throw into an extasy; to transport with enthusiasm.—

I myself

Am, like a prophet, suddenly *enrapt*

To tell thee, that this day is ominous. *Shakespeare.*

2. In the following quotation it seems erroneously written for *enrapt*, involv'd; wrapt up.—Nor hath he been so *enrapt* in those studies as to neglect the polite arts of painting and poetry. *Arbutnot and Pope.*

* **TO ENRAPTURE.** *v. a.* [from *rapture.*] To transport with pleasure; to delight highly.

* **TO ENRAVISH.** *v. a.* [from *ravish.*] To throw into extasy; to transport with delight.—

What wonder,

Frail men, whose eyes seek heavenly things to see,
At sight thereof so much *enravish'd* be? *Spenser.*

* **ENRAVISHMENT.** *n. f.* [from *enravish.*] Extasy of delight.—They contract a kind of splendor from the seemingly obscuring veil, which adds to the *enravishments* of her transported admirers. *Glanville's Scepiss.*

* **TO ENRHEUM.** *v. a.* [enrheumer, Fr.] To have rheum through cold.—The physician is to enquire where the party hath taken cold or was *enrheum'd.* *Harvey.*

* **TO ENRICH.** *v. a.* [enricher, French.] 1. To make wealthy; to make opulent.—The king will *enrich* him with great riches, and will give him his daughter. 1 Sam. xvii. 25.—

Henry is able to *enrich* his queen,
And not to seek a queen to make him rich.

Shakespeare.

Great and glorious Rome, queen of the earth,
So far renown'd, and with the spoils *enrich'd*
Of nations. *Milton's Paradise Regain'd.*

—Those are so unhappy as to rob others, without *enriching* themselves. *Denham.* 2. To fertilise; to make fruitful.—

See the sweet brooks in silver mazes creep,
Enrich the meadows, and supply the deep.

Blackmore.

3. To store; to supply with augmentation of any thing desirable.—There is not any one among them that could ever *enrich* his own understanding with any certain truth, or ever edify others therein. *Raleigh's History.*

* **ENRICHMENT.** *n. f.* [from *enrich.*] 1. Augmentation of wealth. 2. Amplification; improvement by addition.—I have procured a translation of that book into the general language, not without great and ample additions, and *enrichment* thereof.

thereof. *Bacon's Holy War*.—It is a vast hindrance to the *enrichment* of our understandings, if we spend too much of our time and pains among infinites and unsearchables. *Wart's Logick*.

ENRICK, a river of Scotland, in Stirlingshire, which rises in Dundaff hills, 15 miles E. of Drymen, and falls into Loch Lomond.

* To ENRIDGE. *v. a.* [from *ridge*.] To form with longitudinal protuberances or ridges.—

He had a thousand noses,
Horns welk'd and wav'd like the *enridged* sea:
It was some fiend. *Shakef. King Lear*.

* To ENRING. *v. a.* [from *ring*.] To bind round; to encircle.—

Ivy so

Surings the barks fingers of the elm. *Shakef.*

* To ENRIPEN. *v. a.* [from *ripe*.] To ripen; to mature; to bring to perfection.—

The Summer, how it *enripened* the year;
And Autumn, what our golden harvests were.

Donne.

* To ENROBE. *v. a.* [from *robe*.] To dress; to clothe; to habit; to invest.—

Her mother hath intended,
That, quaint in green, she shall be loofe *enrob'd*,
With ribbands pendant, flaring 'bout her head.

Shakepeare.

* To ENROLL. *v. a.* [enroller, Fr.] 1. To insert in a roll, list or register.—There be *enrolled* amongst the king's forces about thirty thousand men of the Jews. 1 *Mac. x. 36*.—We find ourselves *enrolled* in this heavenly family as servants, and as sons. *Spratt*.—

The champions, all of high degree,
Who knighthood lov'd, and deeds of chivalry,
Throng'd to the lists, and envy'd to behold
The names of others, not their own, *enroll'd*.

Dryden.

Mentes, an ever-honour'd name of old,
High in Ulysses' social list *enroll'd*. *Pope's Odyssey*.

Heroes and heroines of old,
By honour only were *enroll'd*
Among their brethren of the skies;
To which, though late, shall Stella rise. *Swift*.

2. To record; to leave in writing.—

He swore consent to your succession;
His oath *enrolled* in the parliament. *Shak. H. VI*.

Laws, which none shall find
Left them *enroll'd*; or what the spirit within
Shall on the heart engrave. *Milton's Par. Lost*.

3. To involve; to inwrap.—

From his infernal furnace forth he threw
Huge flame, that dimmed all the heaven's light,
Enroll'd in dusky smoke and brimstone blue.

Fairy Queen.

* ENROLLER. *n. f.* [from *enrol*.] He that enrolls; he that registers.

* ENROLLMENT. *n. f.* [from *enrol*.] Register; writing in which any thing is recorded; record.—The king himself caused to be enrolled, and testified by a notary publick; and delivered the *enrollments*, with his own hands, to the Bishop of Salisbury. *Davies on Ireland*.—

* To ENROOT. *v. a.* [from *root*.] To fix by the root; to implant deep.—

He cannot so precisely weed this land,
As his misdoubts present occasion:
His foes are so *enrooted* with his friends,

That, plucking to unfix an enemy,
He doth unfasten so and shake a friend. *Shak.*

* To ENROUND. [from *round*.] To surround; to surround; to encircle; to inclose.—

Upon his royal face there is no note
How dread an army hath *enrounded* him.

Shakepeare's Henry V.

(I.) * ENS. *n. f.* [Lat.] 1. Any being or existence. 2. [In chymistry.] Some things that are pretended to contain all the qualities or virtues of the ingredients they are drawn from in little roes.

(i.) ENS POSITIVUM, & ENS REALE, terms used in the schools by metaphysicians, synonymously with ENS, for entity, as above defined, (§ 1, *def. 1*) by way of distinction from

(ii.) ENS RATIONIS, an imaginary being, or a thing that exists only in the imagination.

(II.) ENS, among chemists, (§ 1, *def. 2*) imports the power, virtue, and efficacy, which certain substances exert upon our bodies.

(III. 1.) ENS, in geography, a river of Germany, which rises 4 miles W. of Radstadt in Salzburg, and runs into the Danube, at ENS (N° 2.) in Austria.

(2.) ENS, or ENNS, a city of Austria, seated on an eminence, at the conflux of the Ens and the Danube; and strongly defended by an arsenal and two castles. It was founded about A. D. 900, and lies 90 miles W. by S. of Vienna; and 13 SE. of Linz. Lon. 14. 22. E. Lat. 48. 13. N.

(3.) ENS, a town of the Batavian republic, in the department of the Yssel, and island of Schotland, in the Zuyder Zee: 10 m. NW. of Camper.

* ENSAMPLE. *n. f.* [exemplum, Ital.] Example; pattern; subject of imitation. This orthography is now justly disused.—

Such life should be the honour of your light;
Such death, the sad *ensample* of your night.

Spenser's Sonnet.

—Ye have us for an *ensample*. *Philos. in. 17*.—But as would be willing to make use of our *ensamples* to do the same thing, where there is not the same necessity, may not be able to vouch our practice for their excuse. *Sanderfon*.

* To ENSAMPLE. *v. a.* [from the noun.] To exemplify; to shew by example; to give us a copy.—I have followed all the ancient poets historians; first, Homer, who, in the person of Agamemnon, *ensampled* a good governor and a virtuous man. *Spenser*.

* To ENSANGUINE. *v. a.* [sanguis, Lat.; ensanguiner, Fr.] To smear with gore; to *ensanguine* with blood.—

With cruel tournament the squadrons join,
Where cattle pastur'd late; now scatter'd lie
With carcasses and arms, th' *ensanguin'd* field
Deserted.

Milton's Paradise Lost.

ENSARIANS. See ANSARIANS.

ENSATÆ, in botany, [from *ensis*, a sword: the 6th order in Linnaeus's natural method. See BOTANY, *Index*.]

ENSAY, a small inhabited island of Scotland, in the county and on the coast of Inverclyde, 4 miles E. of Berneray, and separated by a narrow sound from Calligray. It is two miles long, one broad; has a good soil, and is well cultivated; being verdant all over.

ENSCHED.

ENSCHEDÉ, a town of the Batavian republic, in the department of Yssel, and ci-devant province of Overijssel; 5 miles S. of Oldezeel.

* **To ENSCHEDULE**. *v. a.* [from *schedule*.] To insert in a schedule or writing.—

You must buy that peace

With full accord to all our just demands,
Enschedul'd here. *Shakespeare. Henry V.*

* **To ENSCONCE**. *v. a.* [from *sconce*.] To cover as with a fort; to secure. *Hammer*.—I myself sometimes, hiding mine honour in my necessity, and fain to shuffle, to hedge, and to lurch; and yet your rogue will *ensconce* your rags, your cast-a-mountain looks under the shelter of your honour. *Shakespeare*.—

She shall not see me: I will *ensconce* me behind the arras. *Shak. Merry W. of Windsor*.—We make trifles of terrors, *ensconcing* ourselves in seeming knowledge. *Shakespeare*.—

A fort of error to *ensconce*

Absurdity and ignorance.

Hudibras.

This he courageously invaded,
And having enter'd, barricado'd,
Ensconc'd himself as formidable
As could be, underneath a table. *Hudibras*.

* **To ENSEAM**. *v. a.* [from *seam*.] To sew up; to inclose by a seam or juncture of needlework.—A name engraved in the vestriary of the temple, one stole away, and *enseamed* it in his thigh. *Camd*.

* **To ENSEAR**. *v. a.* [from *fear*.] To cauterise; to stanch or stop with fear.—

Ensear thy fertile and conception womb;
Let it no more bring out t' ingrateful man.

Shakespeare.

ENSEELED, in falconry, a term applied to a hawk that has a thread drawn through her upper eye-lid, and made fast under her beak, to take away the light.

ENSEMBLE, [from *in* and *smul*, Lat.] a French term, sometimes used in English; literally signifying *together*, or *one with another*. In architecture, *the ensemble*, or *tout ensemble*, of a building, means the whole work, or composition, considered together, and not in parts; and sometimes also, the relative proportion of the parts to the whole.—“All those pieces of building make a fine *ensemble*.” To judge well of a work, a statue, or other piece of sculpture, one must first examine whether the *ensemble* be good. The *tout ensemble* of a painting, is that harmony which results from the distribution of the several objects or figures whereof it is composed.—“This picture is good, taking the parts separately; but the *tout ensemble* is bad.”

ENSENE, a town of Egypt, on the E. side of the Nile; 120 miles S. of Cairo. Lon. 48. 40. E. of Ferro. Lat. 28. 5. N.

ENSETE. See **ABYSSINIA**.

ENSHAM, a town in Oxfordshire, on the Isis.

* **To ENSHIELD**. *v. a.* [from *shield*.] To shield; to cover; to protect.—

These black masks

Proclaim an *enshield* beauty, ten times louder
Than beauty could display. *Shakespeare*.

* **To ENSHRINE**. *v. a.* [from *shrine*.] To enclose in a chest or cabinet; to preserve and secure as a thing sacred.—

He seems

A phoenix, gaz'd by all, as that sole bird,

When to *enshrine* his reliques in the sun's
Bright temple, to Egyptian Thebes he flies.

Milton.

The fots combine

With pious care a monkey to *enshrine*.

Tate's Juvenal.

Fair fortune next, with looks serene and kind,
Receives 'em, in her ancient fane *enshrin'd*.

Addison.

* **ENSIFORM**. *adj.* [*eniformis*, Lat.] Having the shape of a sword, as the xiphoides or *ensiform* cartilage.

ENSIFORMIS CARTILAGO. See **XIPHOIDES**.

(1.) * **ENSIGN**. *n. f.* [*enfeigns*, Fr.] 1. The flag or standard of a regiment.—

Hang up your *ensigns*, let your drums be still.
Shakespeare.

—The Turks still pressing on, got up to the top of the walls with 8 *ensigns*, from whence they had repulsed the defendants. *Knolles's History*.—Men taking occasion from the qualities, wherein they observe often several individuals to agree, range them into sorts, in order to their naming under which individuals, according to their conformity to this or that abstract idea, come to be ranked as under *ensigns*. *Locke*. 2. Any signal to assemble.—He will lift up an *ensign* to the nations from far. *Isaiah v. 26*. 3. Badge; or mark of distinction, rank, or office.—

Princes that fly, their sceptres left behind,
Contempt or pity, where they travel, find;

The *ensigns* of our pow'r about we bear,

And ev'ry land pays tribute to the fair. *Waller*.

—The marks or *ensigns* of virtues contribute, by their nobleness, to the ornament of the figures; as the decorations belonging to the liberal arts, to war or sacrifices. *Dryden*. 4. The officer of foot who carries the flag. [Formerly written ancient.]

(2.) **ENSIGN**. See **COLOURS**, **FLAG**, **STANDARD**, &c. The Turkish *ensigns* are horses tails; those of the Europeans are pieces of taffety, with divers figures, colours, arms, and devices thereon.

(3.) *The ENSIGN*, (§ 1, def. 4.) is the lowest commissioned officer in a company of foot, subordinate to the captain and lieutenant. It is a very honourable and proper post for a young gentleman at his first coming into the army: he is to carry the colours both in assault, day of battle, &c. and should not quit them but with his life: he must always carry them himself on his left shoulder: only on a march he may have them carried by a soldier. If the *ensign* is killed, the captain must carry the colours in his stead.

(4.) **ENSIGN, NAVAL**, a large standard or banner hoisted on a long pole erected over the poop, and called the **ENSIGN STAFF**.—The *ensign* is used to distinguish the ships of different nations from each other; and to characterize the different squadrons of the navy. The British *ensign* in ships of war is known by a double cross, viz. that of St George and St Andrew, formed upon a field which is either red, white, or blue.

(5.) **ENSIGNS, ANCIENT**. The *ensign* of the ancient Persians, according to Xenophon, was a golden eagle on a white flag; the Corinthians bore a Pegasus, or winged horse, on theirs; the Athenians an owl; the Mæcenians, the Greek letter M; the Lacedæmonians, the Δ. The Romans had a great

great diversity of ensigns; the wolf, minotaur, horse, boar, and at length the eagle, where they stopped: this was first assumed in the 2d year of the consulate of Marius. See EAGLE, § 2. A military ensign on a medal of a Roman colony, denotes it a colony peopled with old soldiers.

* ENSIGNBEARER. *n. f.* [*ensign* and *bear*.] He that carries the flag; the ensign.—If it be true that the giants ever made war against heaven, he had been a fit *ensignbearer* for that company. *Sidney*.

(1.) ENSIGNE. *adj. obs.* Bled, or bleeding.

(2.) ENSIGNE, *n. f. obs.* Blood-letting.

ENSIGN STAFF. See ENSIGN, § 4.

ENSISE, *n. f. obs.* Kind, or quality. *Chauc.*

ENSISHEIM, a town of France, in the department of the Upper Rhine, and late province of Alsace; seated on the Ille, 10 miles SW. of Brisac. It is well built, and consists of about 300 houses. Lon. 7. 30. E. Lat. 47. 58. N.

ENSKIRKEN, a town of Germany, in the late duchy of Juliers, at present, (July 1799) included in the French republic, and department of the Rhesel: 15 miles SW. of Cologne. Lon. 6. 29. E. Lat. 51. 0. N.

* To ENSLAVE. *v. a.* [from *slave*.] 1. To reduce to servitude; to deprive of liberty.—

The conquer'd also, and *enslav'd* by war,
Shall, with their freedom lost, their virtue lose.

Milton.

I to do this! I, whom you once thought brave,
To sell my country, and my king *enslave*! *Dryd.*
Long draughts of sleep his monstrous limbs *enslave*;

He reels, and falling fills the spacious cave.

Dryden's Æneid.

—He is certainly the most subjected, the most *enslaved*, who is so in his understanding. *Locke.*—

While the balance of power is equally held, the ambition of private men gives neither danger nor fear, nor can possibly *enslave* their country. *Swift.*

2. To make over to another as his slave or bondman.—No man can make another man to be his slave, unless he hath first *enslaved* himself to life and death, to pleasure or pain, to hope or fear: command those passions, and you are freer than the Parthian king. *Taylor's Rule of Living Holy*—The more virtuously any man lives, and the less he is *enslaved* to any lust, the more ready he is to entertain the principles of religion. *Tillotson.*—A man, not having the power of his own life, cannot by compact, or his own consent, *enslave* himself to any one, nor put himself under the absolute arbitrary power of another, to take away life when he pleases. *Locke.*

* ENSLAVEMENT. *n. f.* [from *enslave*.] The state of servitude; slavery; abject subjection.—The children of Israel, according to their method of sinning, after mercies, and thereupon returning to a fresh *enslavement* to their enemies, had now passed seven years in cruel subjection. *South.*

* ENSLAVER. *n. f.* [from *enslave*.] He that reduces others to a state of servitude.—

What indignation in her mind,
Against *enslavers* of mankind!

Swift.

ENSON, a village of England, in Shropshire.

ENSPIRID, *adj. obs.* Inspired. *Chauc.*

To ENTSTALL. See To INSTALL.

To ENSTEOP See To INSTEOP.

(1.) ENSTON, a village in Oxfordshire, SE. of Chipping Norton.

(2.) ENSTON, a village NE. of Stafford.

ENSTORF, a town of Germany, in the circle of Bavaria; 22 miles N. of Ratibon.

(1.) * To ENSUE. *v. a.* [*ensuere*, Fr.] To follow; to pursue.—Flee evil, and do good; seek peace, and *ensue* it. *Com. Prayer.*—

But now these Epicures begin to smite,

And say, my doctrine is more safe than true;

And that I fondly do myself beguile,

While these receiv'd opinions I *ensue*. *Devi.*

(2.) * To ENSUE. *v. n.* To follow as a consequence to premises.—Let this be granted, and I shall hereupon plainly *ensue*, that the light of scripture once shining in the world, all other light of nature is therewith in such sort drowned that we need it not. *Hooker.* 1. To succeed in a train of events, or course of time.—

The man was noble;

But with his last attempt he wip'd it out,

Destroy'd his country, and his name remains

To the *ensuing* age abhor'd. *Shakspeare. Cor.*

—Bishops are placed by collation of the king, without any precedent election or confirmation *ensuing*. *Hayward.*—

Of worse deeds worse sufferings must *ensue*.

Milne.

With mortal heat each other shall pursue:

What wars, what wounds, what slaughter shall

ensue!

Dryden.

Impute not then those ills which may *ensue*

To me, but those who with incessant hate

Pursue my life. *Rowe's Ambitious Step-mother.*

Then grave Charissa graceful waw'd her hair:

Silence *ensu'd*, and thus the nymph began. *Pope.*

* ENSURANCE. *n. f.* [from *ensure*.] 1. Exemption from hazard, obtained by the payment of a certain sum. 2. The sum paid for security.

* ENSURANCER. *n. f.* [from *ensure*.] He who undertakes to exempt from hazard.—

The vain *ensurancers* of life,

And they who most perform'd, and promis'd less,

Ev'n Short and Hobbes, forsook th' unequal

strife.

Dryden.

* To ENSURE. *v. a.* [from *sure*, *assurer*, Fr.]

1. To ascertain; to make certain; to secure.—It is easy to entail debts on succeeding ages, but

how to *ensure* peace for any term of years is difficult enough. *Swift.* 2. To exempt any thing

from hazard by paying a certain sum, on condition of being reimbursed for miscarriage. 3. To

promise reimbursement of any miscarriage for a certain reward stipulated.—A mendicant contracted

with a country fellow for a quantity of corn, to *ensure* his sheep for that year. *L'Estrange.*

* ENSURER. *n. f.* [from *ensure*.] One who makes contracts of *ensureance*; one who for a certain sum exempts any thing from hazard.

